MEETING MINUTES

Jersey City Environmental Commission
City Hall – 280 Grove Street, Jersey City NJ 07302

Gerald F. Nicholls, Chair
Sara K. Schultzer, Vice Chair

Meeting: Jersey City Environmental Commission Public Meeting

Date / Location: 17 March 2015 – 6:30 p.m.
Council Chambers, 2nd Floor, City Hall, 280 Grove Street, Jersey City, NJ 07302

Attendees:

Commissioners/City Representatives	Public Participants
Tanya Marione	Lyndsey Scofield (SJC)
Gerry Nicholls	Alison Cucco (URS, environmental)
Sara Schultzer	Amanda Khan (JCPC)
Mario Verdibello	Elna Mukaida (JCPC, HPNA)
Michelle Luebke	Florence Holmes (JCPC)
	Dennis Whiltinghill (Riviv JC)
	Nick Caballero (WPA)
	Beverly Brown
	Jeff Kaplowitz (C21 Plaza)
	Ashwani Vasishth
	Susan Newman (Frogs Are Green)
	Mory Thomas (JCPC/WPA)
	Tim Keating (Earthbilt)
	Claudia Coffman
	Michael Place (bicyclist)
	Elizabeth Reynoso (resident)

Prepared By: Sara Schultzer

Date Prepared: 8 April 2015

ROLL CALL

Four of nine commissioners (seven members and two alternates) were present; four constitutes quorum. Commissioners Ristorucci and Solowsky were absent, and three commissioner positions remain unfilled.

NEW BUSINESS – PRESENTATION BY RUTGERS LANDSCAPE ARCHITECTURE STUDIO: JERSEY CITY ENVIRONMENTAL RESOURCES

- Chair Nicholls welcomed and thanked Professor JeanMarie Hartman, PhD and her students.
- Doctor Hartmann introduced her students (Anthony, Shaun, Josh, Christy, Brianna, Johnny) and requested that everyone provide constructive feedback on their work.
- Providing JCEC with 11x17 sets, environmental inventory, and digital copies (attached to these minutes)

Anthony: Overview

- Scope: Exchange Place to Grove Street.
- Descriptive Board of each area: Heights, JSQ, West Side.

Shaun: 6 Design Solutions

- Functional, Land Use, Redevelopment
- Goals: integrate
- Learn and incorporate local regulations from agencies, i.e., ADD detectable warning systems.
- JSQ
- Bergen Arches: abandoned railroads, work w existing plants

Josh: Reenvisioning Streetscapes

- JFK: move parking to increase visibility, implement infrastructure to slow traffic/color code private/public/ease pedestrian walkway, "public arts committee/community," Bike Paths:
- Center St:
- Ocean Ave:

Christie: Access to Public Transportation

- Transportation Interchange
- Harborside HBLR Station: Hardscapes/barriers/lack of seating
- MLK Dr
- Westside Ave
- CSO Reduction: inventory vacant lots, increase impervious surface area, ROWB/Rain Gardens, lower cost options: Rain Barrels and Wetlands
- 6 different designs on walls.

Breakout Session:

Commissioners and public could view the boards and interact with the students.

Q&A:

- Implementation? Energy/momentum to move ideas forward, pressure to change legislation/regulations, ease processes/instruments
- Rolland JC legislature: 3 easy lifts for City Council? Responses included community involvement, state government storm water fee (like Philadelphia does), fund pilot GI projects implementable with zoning changes. Redevelopment plan and building code for new building development.
- Transportation Areas with overhead stations can incorporate green *and* solar?
- Bicycle ridership stats and # racks at stations? No stats on ridership.
- Take into account rebuilding with energy efficiency **(**Japan kinetic foot panels for energy)
- During their research, the students spoke with City Planning (Bob Cotter) and provided ArcGIS information. He was enthusiastic to a very walkable city with GI and public transportation.
- Knowing your audience's needs/priorities and ever-changing needs w growth/projecting for future: They took that into account, changing attitudes to gain streetscapes lose closer parking, cultural shift with younger generation and overall

GENERAL PUBLIC PARTICIPATION

Gregg Lanez

- Use of volcanic rock in public parks for carbon sequestration
- JMH noted is natural resource requiring strip mining.
- Other materials like that to consider.

Sustainability themes in Jersey City

- CSO reduction
- storm resiliency
- underserved sustainability
- Issues managing trash and recyclables

CLOSING REMARKS AND OTHER BUSINESS BY COMMISSIONERS

None.

ADJOURNMENT

The meeting was adjourned at 8:45 p.m.

NEXT MEETING

The next Environmental Commission is scheduled for 14 April 2015 at 6:30 p.m. in the Caucus Room, 2nd Floor, City Hall, 280 Grove Street, Jersey City, NJ 07302.

*** There will be a Tree Canopy Study Open House on 2 May 2015 ***

RUTGERS
NEW BRUNSWICK

Department of Landscape Architecture
School of Environmental and Biological Sciences
Rutgers, The State University of New Jersey
93 Lipman Drive – Blake Hall 112
New Brunswick, NJ 08901-8524

www.rutgers.edu
www.landarch.rutgers.edu
Phone: 848-932-9317
Fax: 732-932-1940

MEMO

TO: Gerald Nicholls
Jersey City Environmental Commission

FROM: JeanMarie Hartman, Ph.D.

DATE: March 17, 2015

RE: Student Work and digital files

I am pleased to share the work our students did during the fall semester of 2015. They learned a lot during the course and I hope they will see some of their efforts influence your commission and city.

The educational purpose of this type of design exercise should be understood by you and those you share these reports and designs with. Students need to understand real environmental settings when they design landscapes. Their design work is better when they consider the real environmental concerns and people whose quality of life can be improved. So we appreciate that Jersey City – including the Mayor's Office, the City Council, and the Environmental Commission has helped us with this project. We also appreciate the time and attention contributed by some of the NGO's in Jersey City.

However, this is a set of student projects, there may be errors, oversights, or mis-understanding. They are for discussion and inspirations and idea generation. The Environmental Inventory needs additional documentation and field checking. A completed Environmental inventory would allow you to make better evaluations of

- the city's master plan,
- the potential impacts of new development and re-development
- the potential impacts of zoning waivers
- the potential impacts of zoning changes

Ideally, the document should be able to help incoming politicians set priorities in their agenda that relate to the health and quality of life of their constituency.

This was an opportunity to begin the development of a contemporary Urban Environmental Resource Inventory for a community that is facing staggering rates of change and major environmental justice issues.

With your support and the help of Sustainable Jersey City, I have applied for funding to complete this task. If that funding proposal is not successful, I hope we can discuss ways to find funding to complete this important task with the professional and technical quality you need.

Keep in touch and keep up the good work!

Five Design Studies for Jersey City

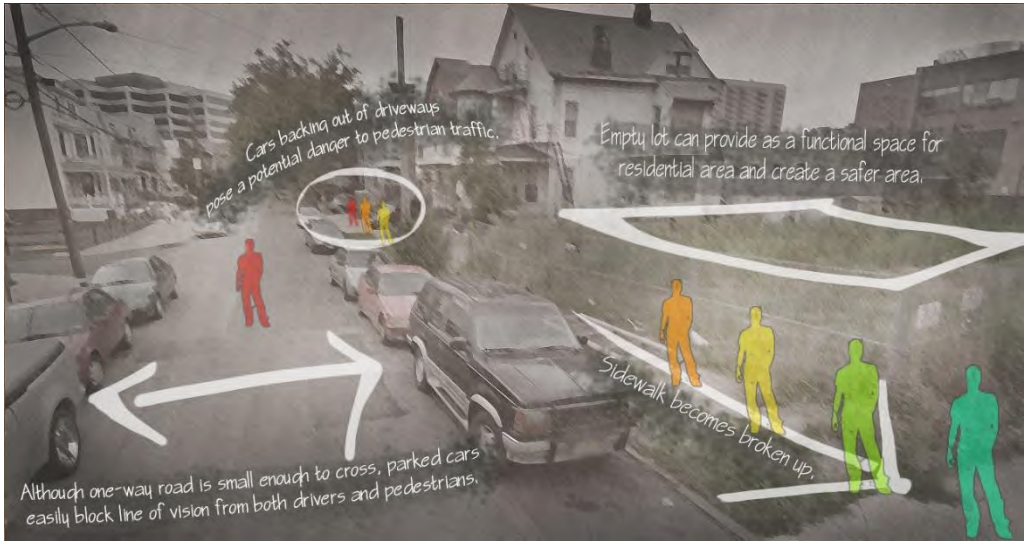
Developed by the Students in
Intermediate Landscape Architecture I (Fall 2014)
From
Department of Landscape Architecture
School of Environmental and Biological Sciences
Rutgers, The State University of New Jersey
New Brunswick, NJ

Course Instructors:
David Smith
JeanMarie Hartman, Ph.D.

<u>Design Topic</u>

1.) Historic Enhancements
2.) Bergen Arches
3.) Re-Envisioning Streetscapes
4.) Improving Bike Paths
5.) CSO Event Reduction

ALEXIS SCHENKER / KARINA LIVSHITS / MICHELLE LIM

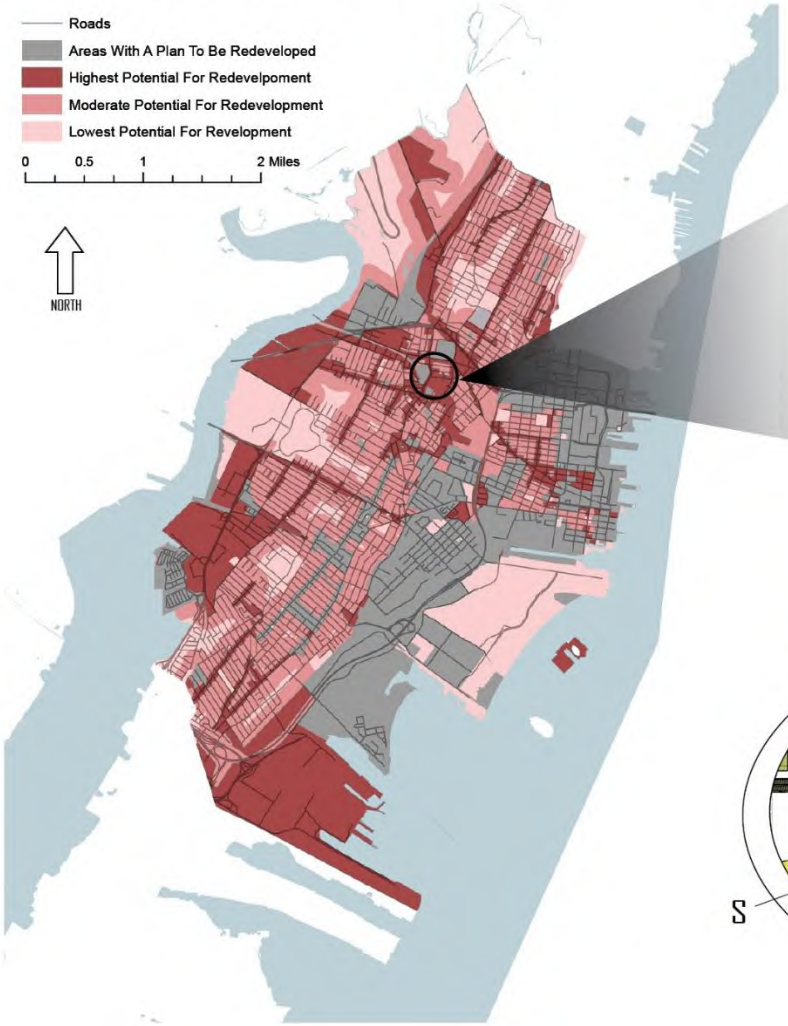


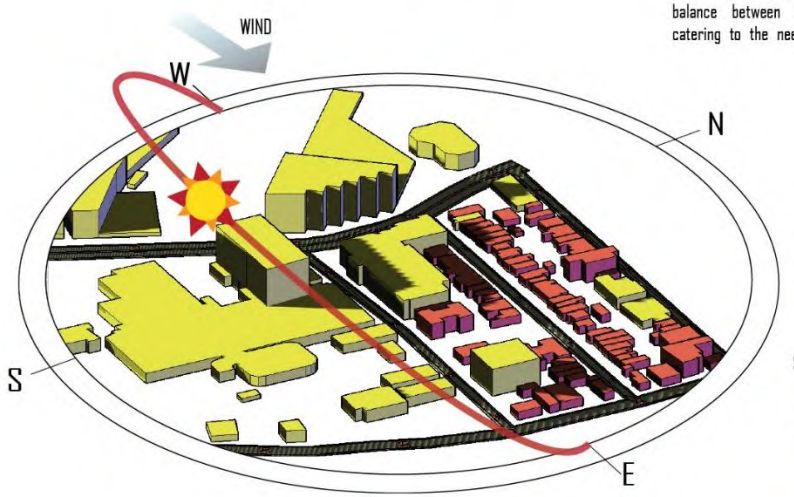
JERSEY CITY
DESIGN PROPOSALS

HISTORICAL ENHANCEMENTS
RISK ANALYSIS

ALEXIS SCHENKER / KARINA LIVSHITS / MICHELLE LIM

12/18/2014





RISK ANALYSIS MAP

This map was comprised of a redevelopment map, urban enterprise zones, parks, and water bodies in Jersey City, New Jersey.

We calculated that the risk of development for the next area to be developed was within 600 feet of the enterprise zones, which is the length of one block away from these zones.

In the darkest red is the highest level of risk of redevelopment. The next lightest color is the zones with moderate risk of redevelopment and the lightest pink has the lowest risk of redevelopment. Our analysis of this map will help in other areas of Jersey City to define a suitable space for historic enhancements based upon the next area a a high risk of redevelopment.

Journal Square was chosen to be the design prototype for our enhancements. Journal Square is the most at risk and is next to an area that already has a plan for redevelopment (gray areas). This allows us to respect historic aspects of Jersey City, while new redevelopments are ongoing. In turn, this creates a balance between neighborhood and commercial spaces while catering to the needs of the diverse communities in Jersey City.

SUN/SHADE DIAGRAM

Residential
Commercial

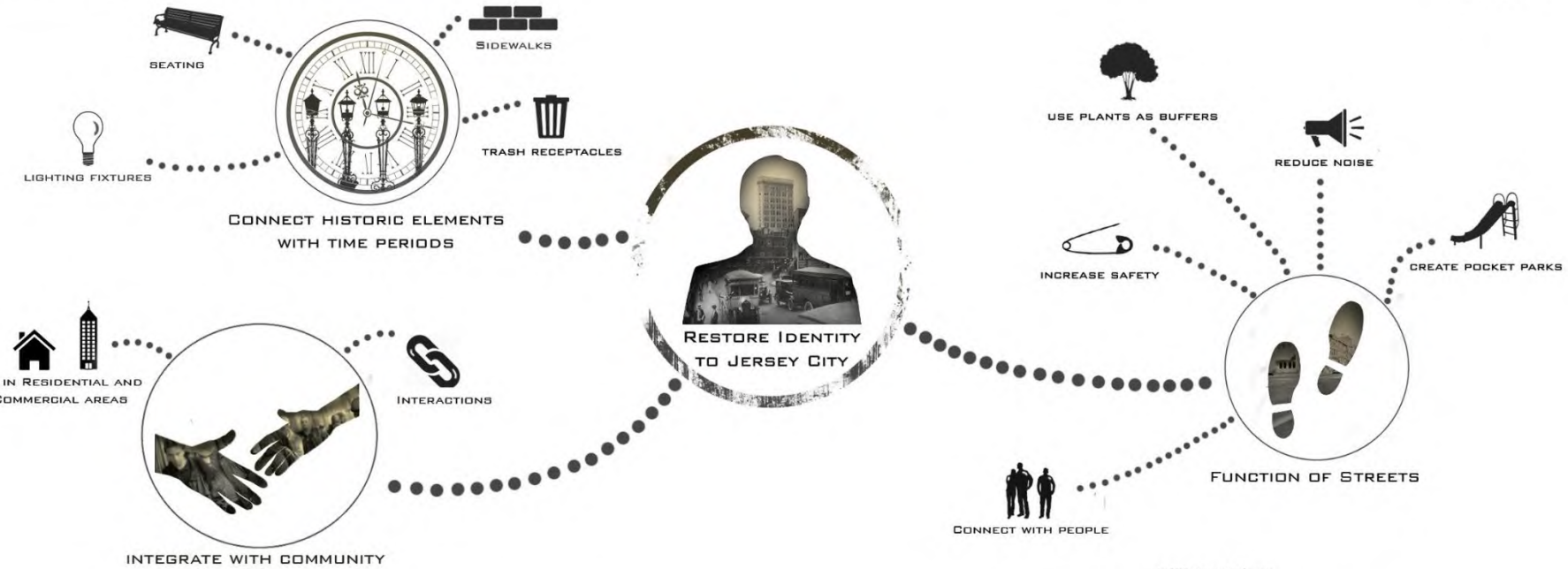
<Risk Analysis Map> from <NJDEP>
<Projected Coordinate System> by < NAD_1983_StatePlane_New_Jersey_FIPS_2900_Feet>

JERSEY CITY
DESIGN PROPOSALS

HISTORICAL ENHANCEMENTS PROGRAM AND HISTORIC TIMELINE

ALEXIS SCHENKER / KARINA LIVSHITS / MICHELLE LIM

12/18/2014



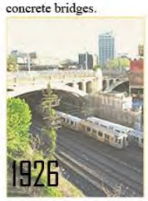
Before development of Journal Square, it was the site of farmhouses and manors belonging to descendents of Bergen, south of Bergen Square.

NewKirk House was built and is often known as the Summit House. It is one of the oldest surviving structures in Journal Square. The house is comprised of different building materials that have been maintained up to this day.

Appletree house was built in 1750,There was an addition added in the 1820s. The house may have been the site of a meeting between George Washington and the Marquis de Lafayette in 1779.

Journal Square was created when they condemned and demolished the offices of the Jersey Journal and was named in it's honor.

The bridge that supports JFK boulevard was completed by Abraham Burton Cohen, an American Civil Engineer known for famous concrete bridges.



Labor Bank Building is built, being the city's first skyscraper, and the original headquarters for Labor National Bank. It has a Beaux-Arts architectural style, and was designed by John T. Rowland.

Stanley Theatre opened and became the 6th largest movie palace in the country in 1928. It was purchased by the Watchtower Bible and Tract society to be restored as a regional Jehovah's Witnesses Assembly Hall.

In 1929, Loew's Theater opened it's doors, in 1986 it was sold to NJ's largest developer and the palace closed its doors. Six year crusade began to stop the demolition of the theatre, which drew out many preservationists and volunteers to speak out against the demolition.

Before being named Kennedy Blvd, it was known as the Hudson Boulevard until being named after John F. Kennedy shortly after his assassination when he gave his last speech in his campaign two days before election day.

<Timeline Images Sources in Order: njcu.edu, njcu.edu, hudsoncountynjgenealogy.org, njcu.edu, wikipedia.org, wikipedia.org, flickr.com, destinationjerseycity.com, nj.com>

JERSEY CITY
DESIGN PROPOSALS

HISTORICAL ENHANCEMENTS DIAGRAMS

ALEXIS SCHENKER / KARINA LIVSHITS / MICHELLE LIM

12/18/2014

Current Views

COMMERCIAL STREET SAFETY DIAGRAM

RESIDENTIAL STREET SAFETY DIAGRAM

POCKET PARK ENTRANCE SAFETY DIAGRAM

Current Lighting

<Diagram Base Plan> from <Google Maps, NJDEP>
<Image Files> from <Google Maps>

JERSEY CITY
DESIGN PROPOSALS

HISTORICAL ENHANCEMENTS
JOURNAL SQUARE RESIDENTIAL PERSPECTIVES

ALEXIS SCHENKER / KARINA LIVSHITS / MICHELLE LIM

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PLANTERS HOUSE PLANTERS LIGHTING PARK SPACES

Planter Plants:
Abelia x Grandiflora
Itea Virginica

Iron-grid Planters
16"x16"x16"
$400
Pennoyer and Newman

Brick Flooring
$11.49 avg cost/sqft
with labor

Concrete Footing
$90/cubic yd
$60 delivery/load

Outdoor 2 Light 93" Post Lantern Set Finish: Black
$284
TransGlobe Lighting

Geranium Plantings
$20.00
BlueStone top : $290
each

RESIDENTIAL STREET - VAN REIPEN AVENUE

TREE CHOICES:

Eastern White Pine
Sweetbay Magnolia
Flowering Dogwood
Serviceberry

Outdoor Post Lantern
$91
Wayfair

Jarith Fencing Jefferson
8ft x 5ft Black Aluminum
$580.80
Home Depot

Jarith Fencing Jefferson
5ft x 5ft Black Aluminum
$320.10
Home Depot

Bradford Steel Arbor
$299.99
Garden2home

Ultra Play 6ft Black Steel Rectangle Picnic Table
$356.56
Lowe's Store

PLANTING CHOICES:

Switch Grass
Butterfly Bush
Golden Pygmy Barberry
Murraya Hedge
Winterberry Holly
Virginia Sweetspire
Glossy Abelia

Wood Planter 62" x 15"
$349.90
Home Depot

<All image files> from <daniellempowell.files.wordpress.com, flmnh.ufl.edu, upload.wikimedia.org, pinterest.com, teleflora.com, njcnj.org, mossyoakfences.com, homedepot.com, lowes.com, garden2home.com, wayfair.com, Google street view>
<Journal Square Plan> from <Google Maps; NJDEP>
<Materials List> from <garden2home.com, wayfair.com, amazon.com, homedepot.com, lowes.com, pennoyernewman.com, tglighting.com>

JERSEY CITY
DESIGN PROPOSALS

HISTORICAL ENHANCEMENTS
JOURNAL SQUARE COMMERCIAL PERSPECTIVES

ALEXIS SCHENKER / KARINA LIVSHITS / MICHELLE LIM

12/18/2014

PLANTINGS TRASH LIGHTING HISTORIC CLOCKS

TransGlobe Lighting 93" Post Lantern Set Finish: Black
$284
GoingLighting

Corten Steel Planters 16"x46"x16"
$249
Wayfair

TREE CHOICES:

Flowering Dogwood
Serviceberry
Eastern White Pine

Sitting Bench BH20104
$120-300
Alibaba.com

PLANT CHOICES:

Arborvitae
Butterfly Bush
Golden Pygmy Barberry
Rhododendron
Variegated Liriope
Dwarf Fountain Grass
Virginia Sweetspire
Glossy Abelia

Pennington 40" x 12" Wood Planter Box
$59.98
Home Depot

COMMERCIAL STREET - JOHN F. KENNEDY BLVD

COMMERCIAL STREET - JOHN F. KENNEDY BLVD and VAN REIPEN AVE

Kichler Lighting Madison Flourescent Outdoor Post Lantern Tan
$91
Wayfair

Red Brick
$206.28ft/sq
Includes labor and equipment

Clock
$3,995

Metal Trash Can
$799
webstaurantstore.com

Western Red Cedar Large Barrel
$34.98
Home Depot

Bronze Plaque with Inscription
$95-300
PlaqueMaker

Red Brick
$206.28ft/sq
Includes labor and equipment

<All image files> from <daniellempowell.files.wordpress.com, flmnh.ufl.edu, upload.wikimedia.org, pinterest.com, taleflora.com, nps.nj.org, mossyoakfences.com, homedepot.com, wayfair.com, Google street view, plaquemaker.com, webstaurantstore.com, spinglighting.com, alibaba.com>
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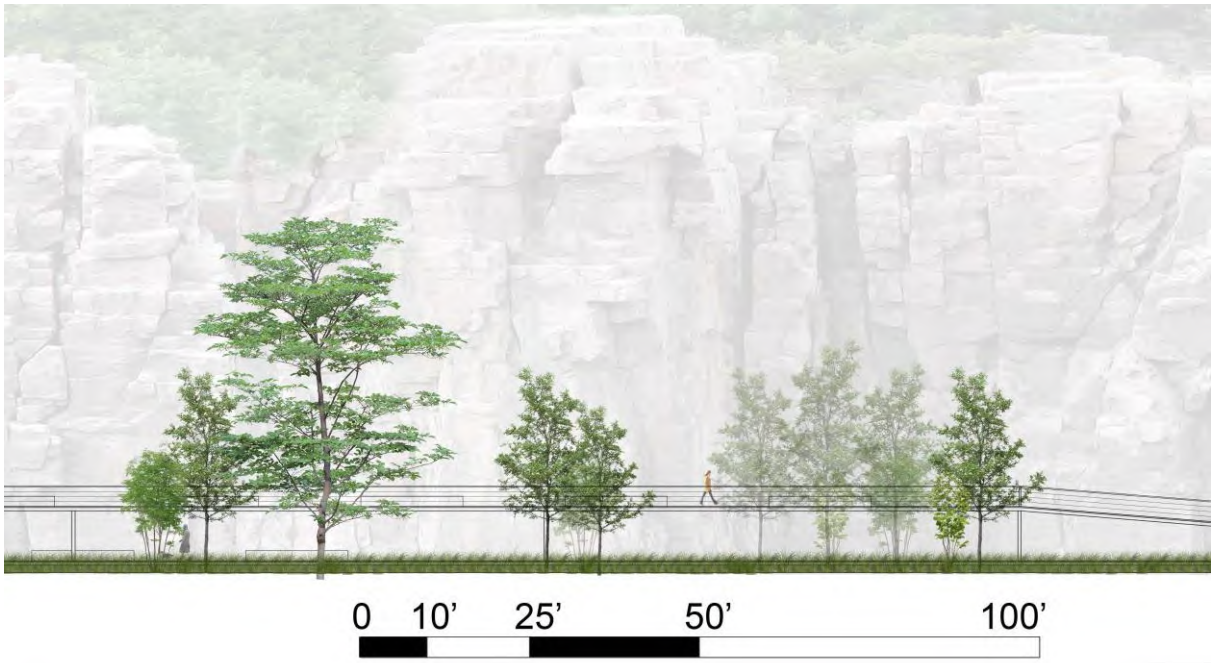
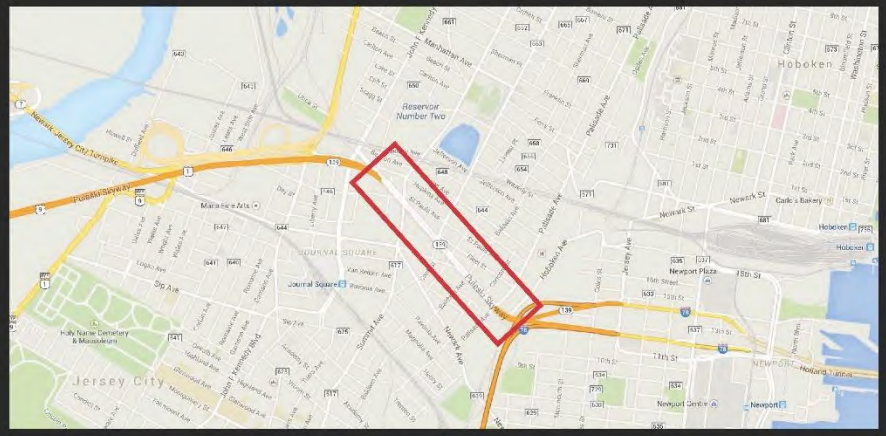

0
10’
25’
50’
100’

FOSS/ THOMSON

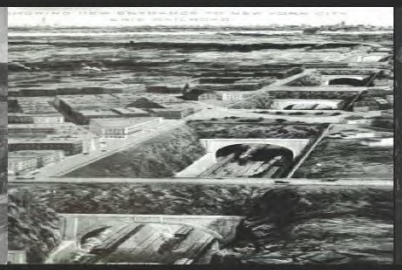
12/18/14

CONTEXT MAP



1880

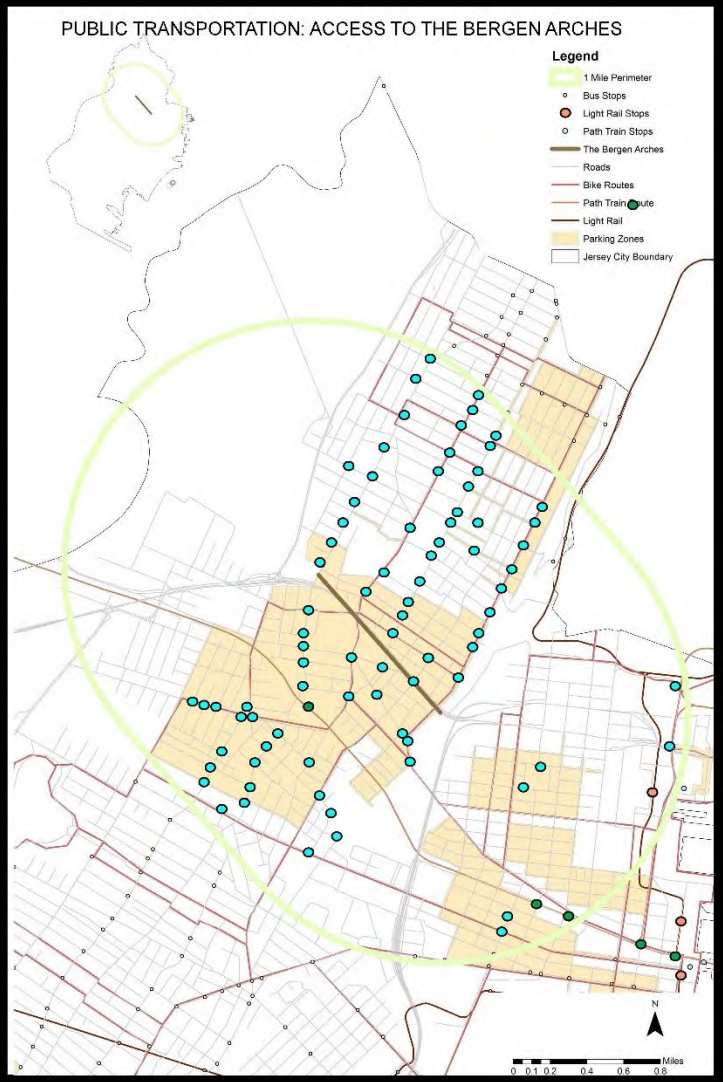
1910

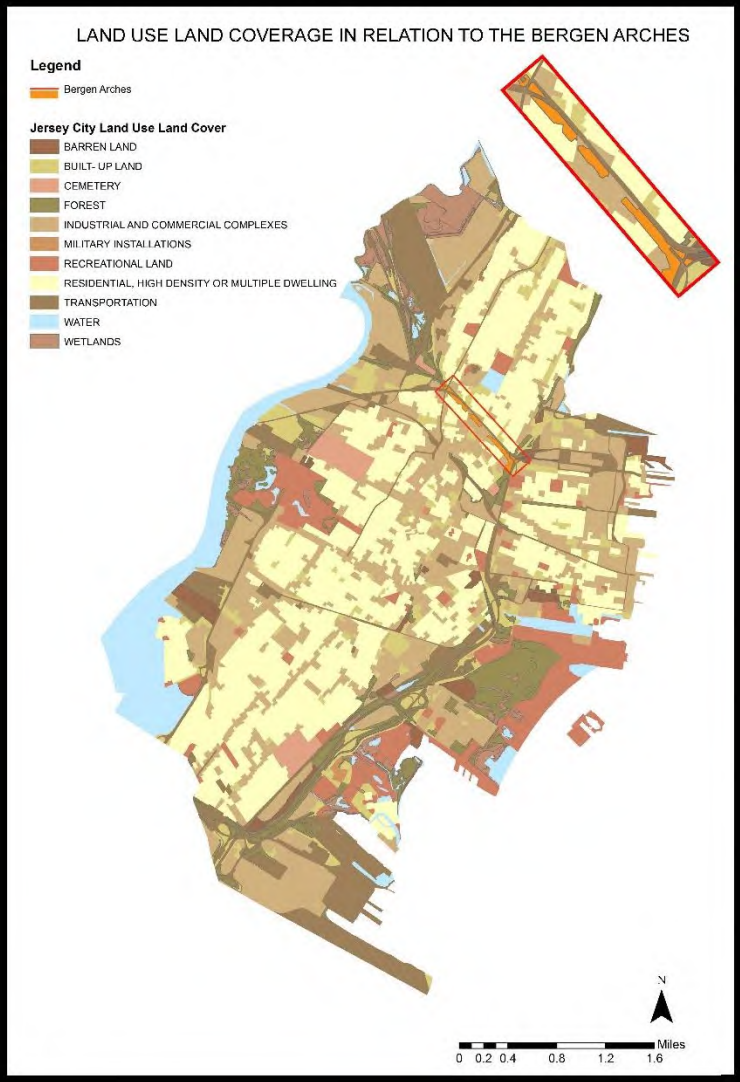


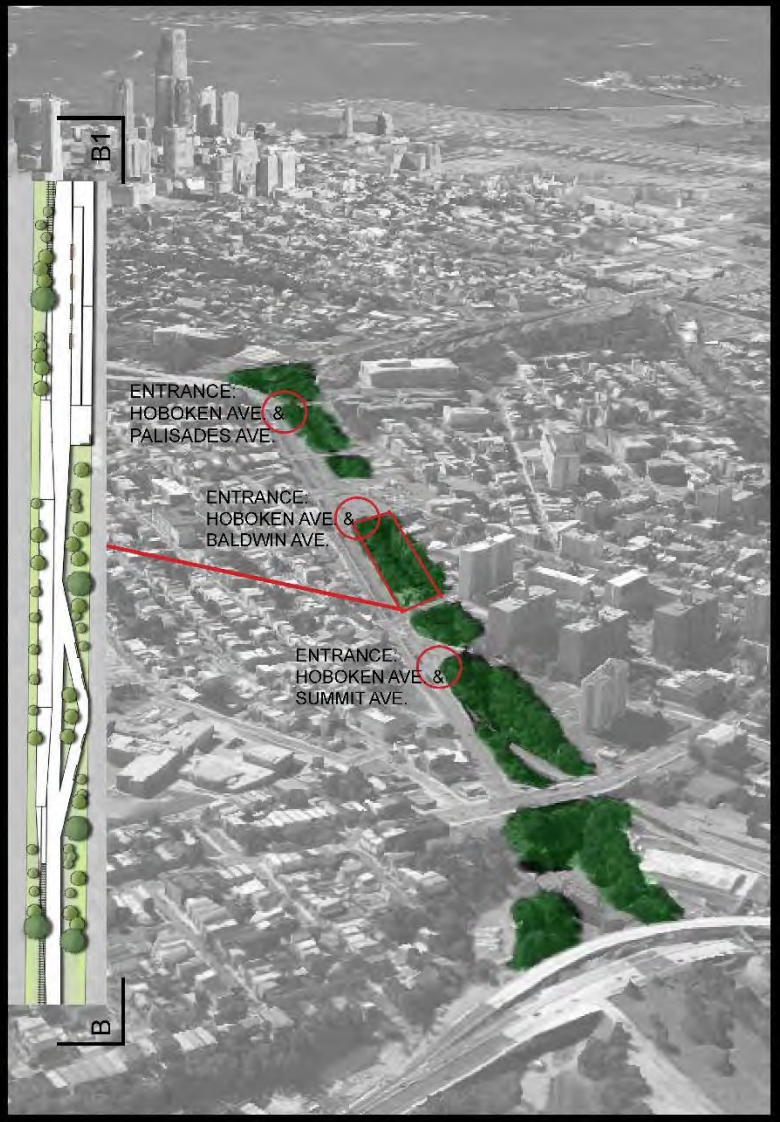
1936

1956

P R E S E N T


PUBLIC TRANSPORTATION: ACCESS TO THE BERGEN ARCHES
Legend
1 Mile Perimeter
Bus Stops
Light Rail Stops
Path Train Stops
The Bergen Arches
Roads
Bike Routes
Path Train Route
Light Rail
Parking Zones
Jersey City Boundary
N
Miles
0 0.1 0.2 0.4 0.6 0.8

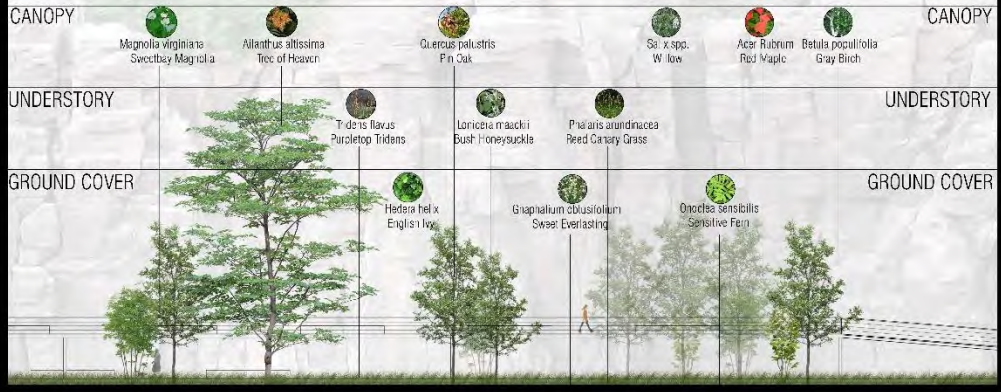

LAND USE LAND COVERAGE IN RELATION TO THE BERGEN ARCHES
Legend
Bergen Arches
Jersey City Land Use Land Cover
BARREN LAND
BUILT- UP LAND
CEMETERY
FOREST
INDUSTRIAL AND COMMERCIAL COMPLEXES
MILITARY INSTALLATIONS
RECREATIONAL LAND
RESIDENTIAL, HIGH DENSITY OR MULTIPLE DWELLING
TRANSPORTATION
WATER
WETLANDS
N
Miles
0 0.2 0.4 0.8 1.2 1.6



PROGRAMMING THE BERGEN ARCHES

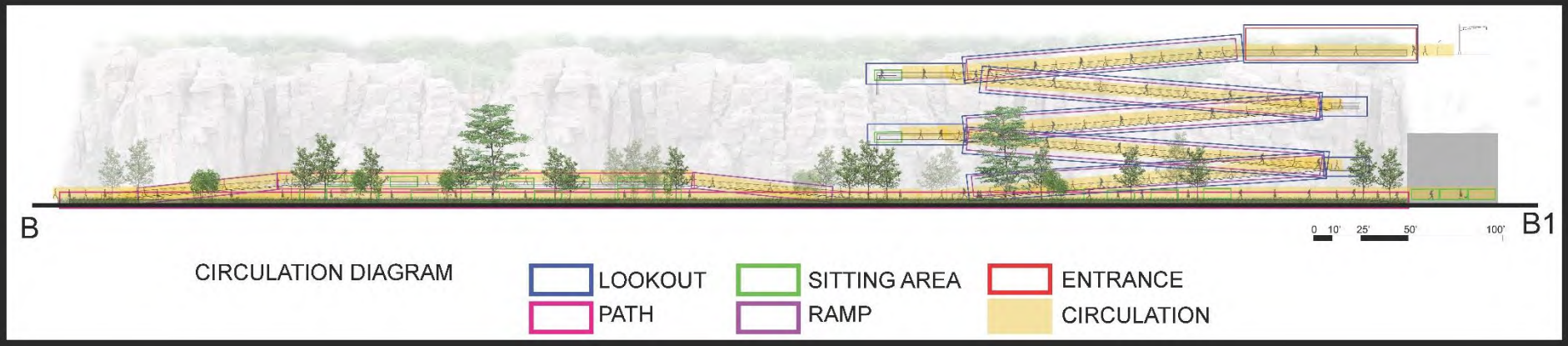
- **SOCIAL SPACES** — LIESURE, SEATING, ART EXHIBITS
- **ACCESSIBILITY** — HANDICAP, DEVELOP EXITS, BIKE RACKS, PEDESTRIANS, DEVELOP ENTRANCES
- **PRESERVATION** — HISTORY, GEOLOGY, HORTICULTURE
- **COMMUNITY** — VOLUNTEER, GARDENING, JOBS, ART EXHIBITS
- **SAFETY** — ACCESS, SURVEILLANCE, LIGHTING
- **CONNECTIVITY** — MASS TRANSIT, COMMUNITY, OPEN SPACE
- **EDUCATION** — HISTORY, GEOLOGY, ECOLOGY, HORTICULTURE, ART
- **SUSTAINABILITY** — HORTICULTURE, STORMWATER MANAGEMENT, ECOLOGY

SPONTANEOUS URBAN PLANT PROGRAM



FOSS/ THOMSON

12/18/14

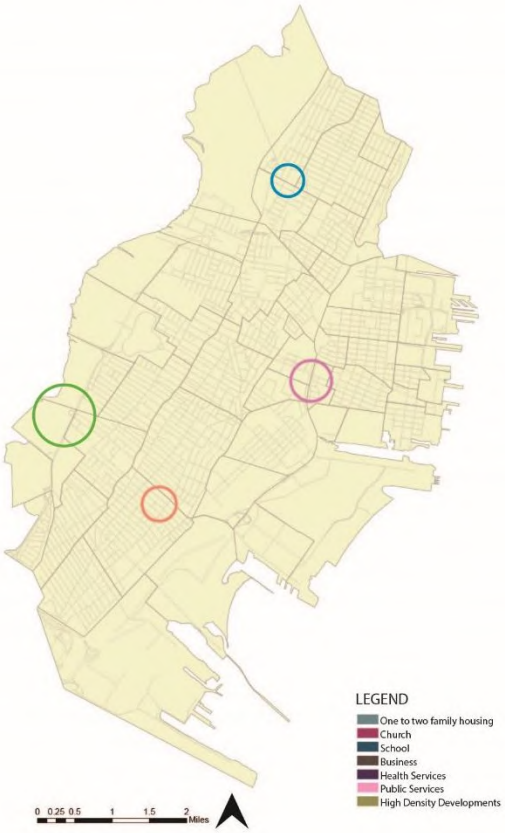


REENVISIONING STREETSCAPES

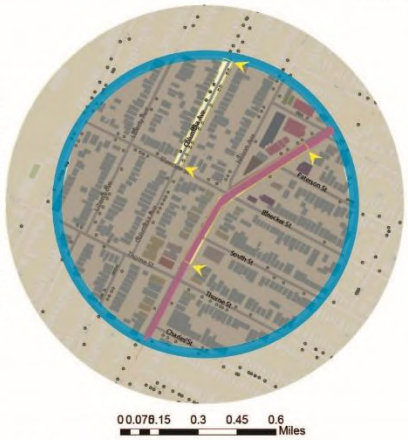
Breanna Robles Joshua Rodriguez Stacy Martinez

REENVISIONING STREETSCAPES

Breanna Robles Joshua Rodriguez Stacy Martinez



J.F.Kennnedy Blvd & Columbia Ave



The Heights
Neighborhood Main Street
County Road

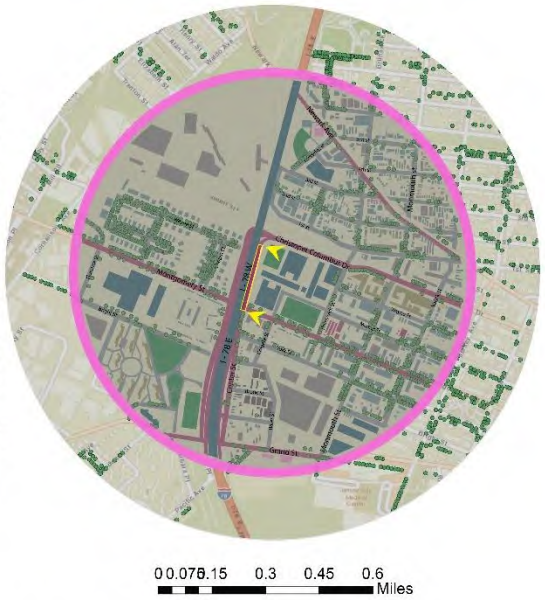
Kennedy Blvd is a well traveled streets with motal as well as pedestrian traffic. The area is filled with schools, churchs, businesses and homes so there is always activity on the streets.

Columbia Ave

Reenvisioning Streetscapes

Breanna Robles Joshua Rodriguez Stacy Martinez

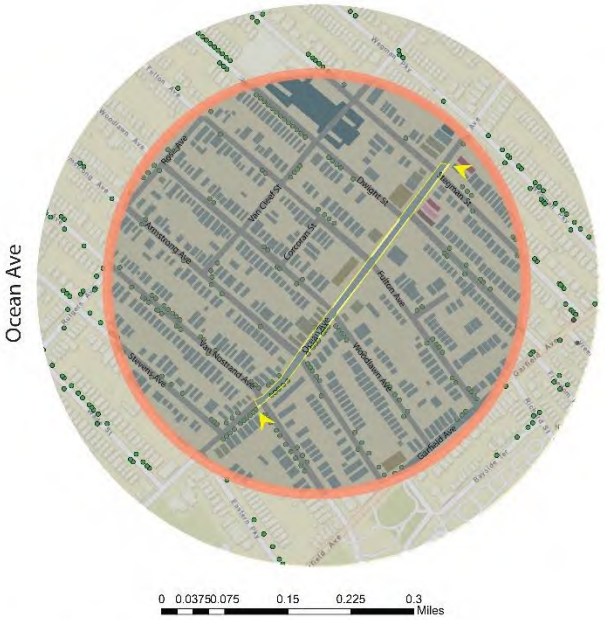
Center Street & Christopher Columbus Dr



Downtown
Frontage Road
County Road

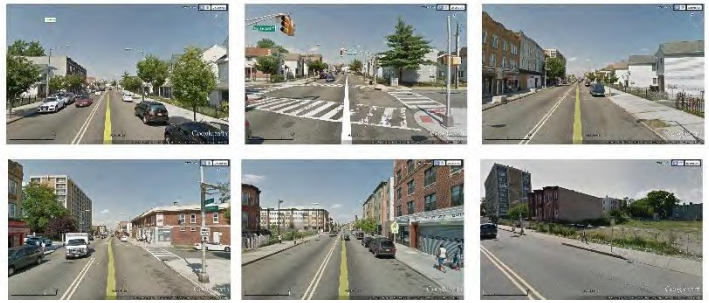
Littered with old warehouses and vacant homes, Center St, is a frontage road that runs parallel to I-78 and also has an exit from it coming onto the street. The area has high schools, shopping marts, businesses and active residents so it recieves heavy foot as well as motal traffic.

Ocean Ave



Greenville
Mixed Neighborhood Street

Ocean Ave is mostly surrounded by homes. Mixed residences line the street, small businesses being a major factor of the street. There are abandoned lots, and vacant buildings that also line the street that people still make use of. The areasrecently went under development givng the area new affordable houses for people to live in.



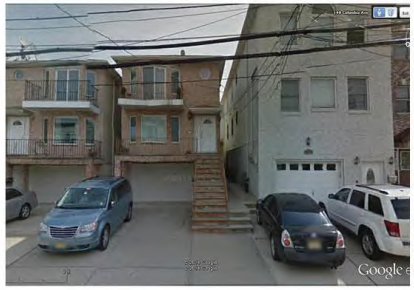
REENVISIONING STREETSCAPES

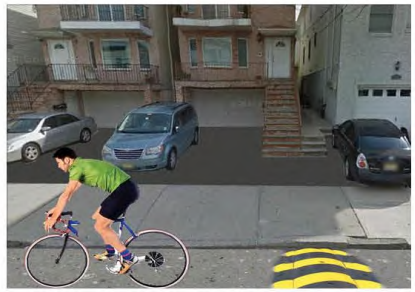
Breanna Robles Joshua Rodriguez Stacy Martinez

J.F.K Blvd. & Columbia Ave

0 0.0125 0.025 0.05 0.075 0.1 Miles

N

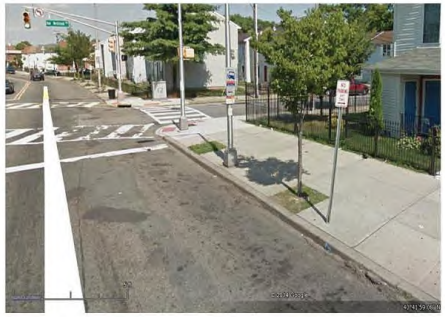




Reenvisioning Streetscapes

Breanna Robles Joshua Rodriguez Stacy Martinez

Ocean Ave



Reenvisioning Streetscapes

Breanna Robles Joshua Rodriguez Stacy Martinez

Center St & C.Columbus Dr

JERSEY CITY
DESIGN PROPOSALS

Public Arts Program Jersey City
Siteplan / Case Studies Board

Joshua Rodriguez / Stacy Martinez / Breanna Robles

December 11th, 2014

- Implementation of Walking Tours
- Waterfront Art Walkway
- Portable Collection of Public Art
- Temporary Art Installations
- Public Art Plazas
- Local Artist Priority
- Call for Artists Applications

- Percent for Art Program
- One Percent of Development to the Arts
- Strong Ties to the Community
- Storefronts, Facades, and other unusual Sites for Art
- Teaches and Engages Community
- Exhibitions of Temporary Art in the City

- Clear Commitment to Student Artists
- Permission Pieces Throughout the City
- Strong Aesthetic Presence in Urban and Rural Areas
- The Community has a Strong Voice in the Selection Process
- Public Art Exhibition Events

- Commitment to the Community of Jersey City
- Art House Productins Partnership
- Community Gardens
- Getting the Community Involved in City Events
- Commitment to Community Events
- Mural Arts Program

JERSEY CITY
DESIGN PROPOSALS

Public Arts Program Jersey City
Diagramtical Board

Joshua Rodriguez / Stacy Martinez / Breanna Robles

December 11th, 2014

Thoughts & Perception

Public art can be a key factor in establishing a unique and culturally active place.

American cities and towns aspire to be places where people want to live and want to visit. Having a particular community identity is important.

Places with strong public art expressions break the trend of bland-ness and same-ness.

As has been witnessed throughout history, public art can be an essential element when a municipality wishes to progress economically and to be viable to its current and prospective citizens.

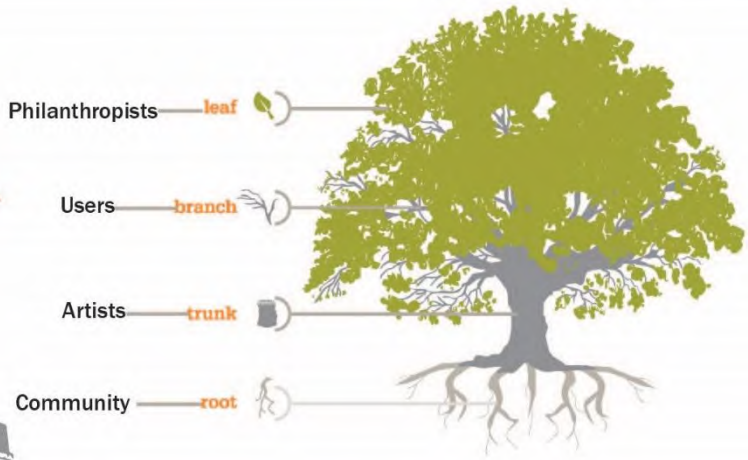
Public art is a reflection of its place and time. It acts as a place marker in all human settlements.

Public art brings artists and their creative vision into the civic decision making process.

Cities gain value through public art; cultural, social, and economic value is established.

Public Arts Committee

The Big Picture



Decision Making Process

JERSEY CITY
DESIGN PROPOSALS

Public Arts Program Jersey City
Siteplan / Case Studies Board

Joshua Rodriguez / Stacy Martinez / Breanna Robles

December 11th, 2014

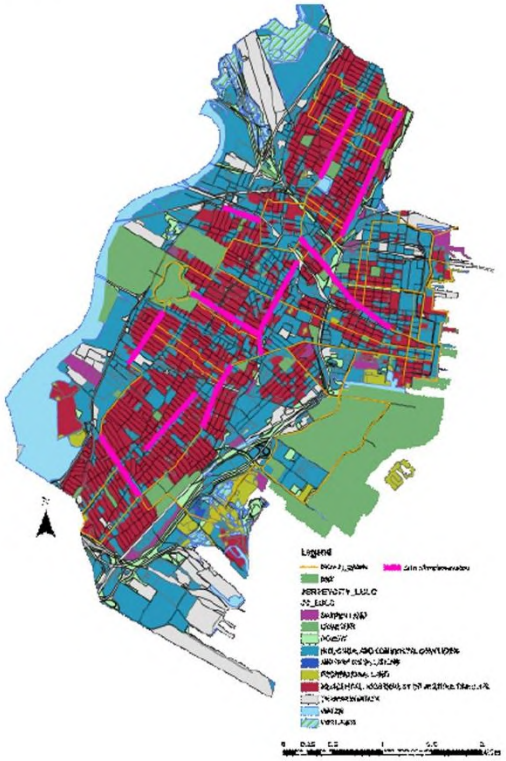
Ocean Avenue

MATT BOWMAN / AUSTIN SCOTT / KEVIN TAYLOR / ALEX THESING

DECEMBER 2014

The first diagram shows areas throughout Jersey City where invterventions similar to the one we designed can be implemented.

The diagrams below show the most important items that were used to decide why a bike path leading down Manila Ave, past the Grove Street PATH station, and down to Liberty State Park.



JERSEY CITY
DESIGN PROPOSALS

IMPROVED BIKE PATHS DIAGRAMS

MATT BOWMAN / AUSTIN SCOTT / KEVIN TAYLOR / ALEX THESING

DECEMBER 2014

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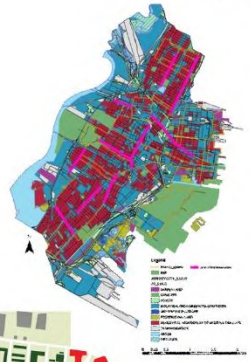


Density Diagram

Lighting Diagram

Points of Interest

Land Use Diagram

JERSEY CITY
DESIGN PROPOSALS

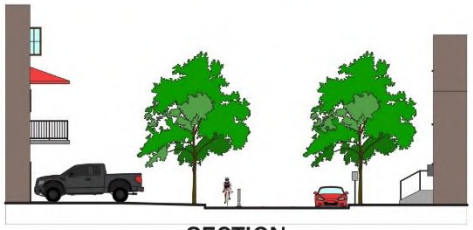
IMPROVED BIKE PATHS
MANILA AVENUE & GRAND STREET

MATT BOWMAN / AUSTIN SCOTT / KEVIN TAYLOR / ALEX THESING

DECEMBER 2014

PLAN

MANILA AVE.



SECTION

PERSPECTIVE

GRAND ST.

PLAN

SECTION

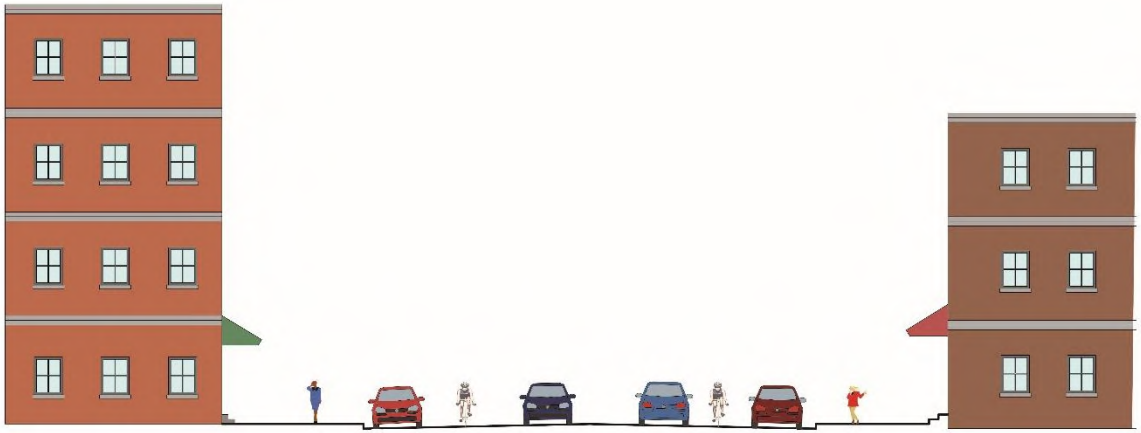
PERSPECTIVE

JERSEY CITY
DESIGN PROPOSALS

IMPROVED BIKE PATHS
GROVE ST PATH STATION PLAN

MATTHEW BOWMAN / AUSTIN SCOTT / KEVIN TAYLOR / ALEXANDER THESING

December 2014



Grove St Section BEFORE

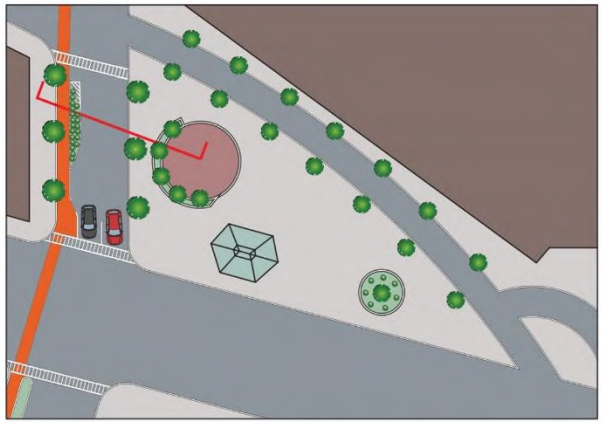
Scale 3/16"=1'

Grove St Section AFTER

Scale 3/16"=1'

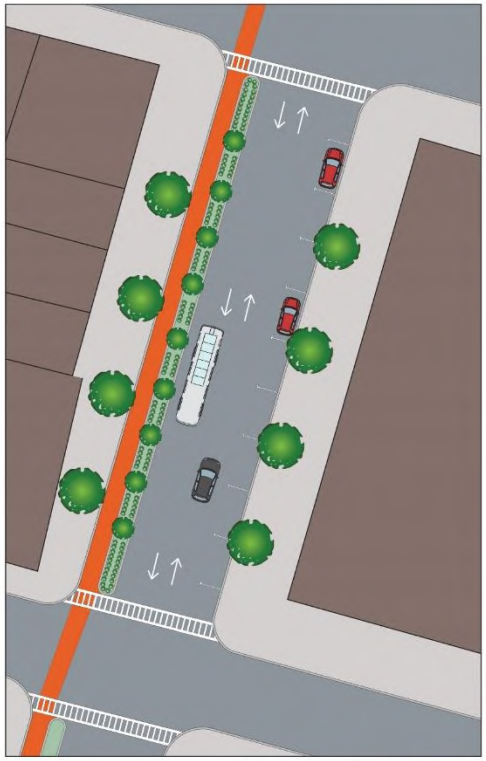
MATTHEW BOWMAN / AUSTIN SCOTT / KEVIN TAYLOR / ALEXANDER THESING

December 2014



Call Out Plan Grove Path Plaza Scale 1/32″=1′

Section 1 Grove Path Plaza Scale 3/16″=1′



Call Out Plan of Bike Path Scale 1/167″=1′

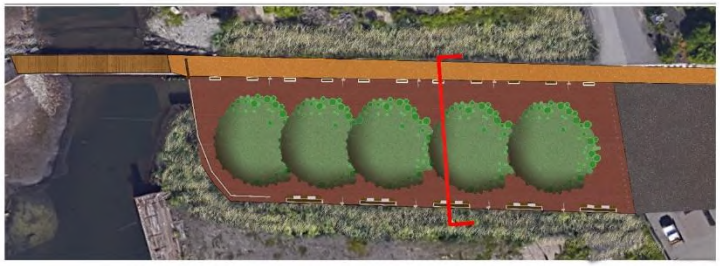
Grove St Bike Path Plan Scale 1/64″=1′

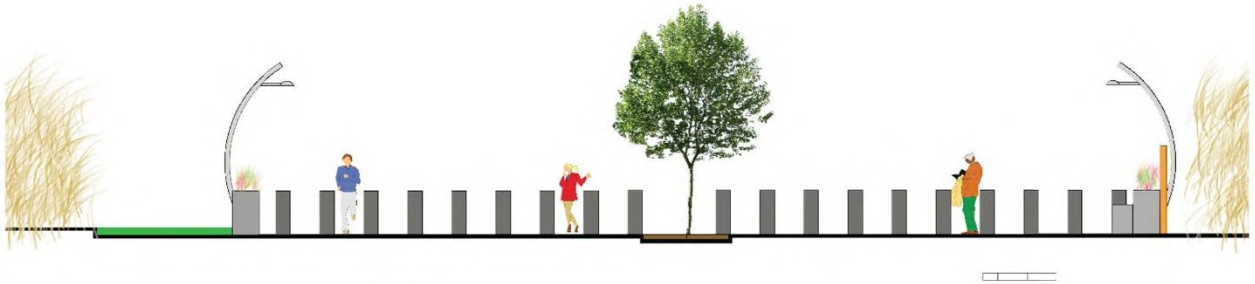
JERSEY CITY
DESIGN PROPOSALS

IMPROVED BIKE PATHS
JERSEY AVENUE

MATT BOWMAN / AUSTIN SCOTT / KEVIN TAYLOR / ALEX THESING

DECEMBER 2014

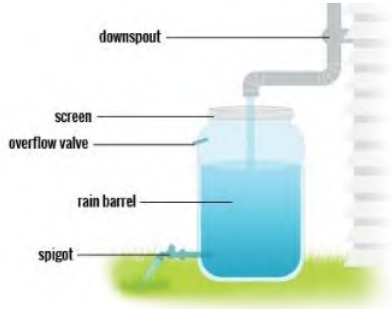




AMBER BETANCES / LORRI LINDSAY / CHRISTIE SALIBA

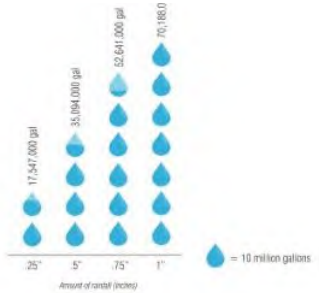
DECEMBER 2014

WHAT IS GREEN INFRASTRUCTURE?



RAIN BARRELS

- Collects and stores roof water run off that can be reused when necessary and saves water from going into the combined sewer systems
- An estimated total of 58, 490 residences in Jersey City can install multiple rain barrels and conserve up to 1200 gallons per household
- The diagram to the right describes how much water could be conserved throughout Jersey City based on our estimates on a 1200sf roof area



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JERSEY CITY
DESIGN PROPOSALS

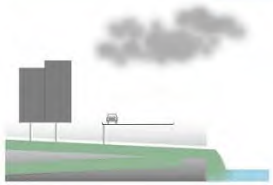
CSO EVENT REDUCTION IN JERSEY CITY
INTRODUCTION

AMBER BETANCES / LORRI LINDSAY / CHRISTIE SALIBA

DECEMBER 2014

WHAT IS A COMBINED SEWER SYSTEM?

- Combined Sewer Systems are sewer systems designed to collect stormwater runoff, domestic sewage, as well as industrial wastewater in the same pipe, bringing it to a publicly owned wastewater treatment work facility
- These systems are not designed to handle large rain storm events

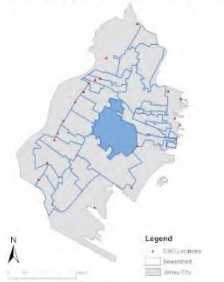


WHAT IS A COMBINED SEWER OVERFLOW?

- Combined Sewer Overflows occur when the combined sewer systems over-capacitate from a storm event
- Excess untreated water is discharged directly into local waterbodies such as rivers, oceans, streams, etc.
- The excess water may contain untreated sewage that can gravely impact human health, as well as water quality for the rest of the city

DESIGN INTERVENTION: IMPLEMENTING GREEN INFRASTRUCTURE IN JERSEY CITY

- 65% of Jersey City uses combined sewer systems and currently has 21 CSO sites
- The city currently lacks the funding to upgrade their current water infrastructure: green infrastructure is an alternate cheap and highly effective way to curb excess water from entering Jersey City's sewer systems
- Through analysis and investigation, our group found that certain areas benefit from green infrastructure over other areas
- Abandoned lots dispersed throughout the city serve as prime opportunities where green infrastructure can be implemented successfully



CSO points overlayed on the sewersheds of Jersey City show the spread of the 21 CSOs. This group address design implementation in one watershed to serve as an example for the rest of the city.

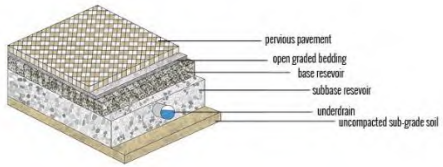
Vacant lots overlayed on income levels found in Jersey City show the correlation between low income areas and the density of vacant lots in the area.

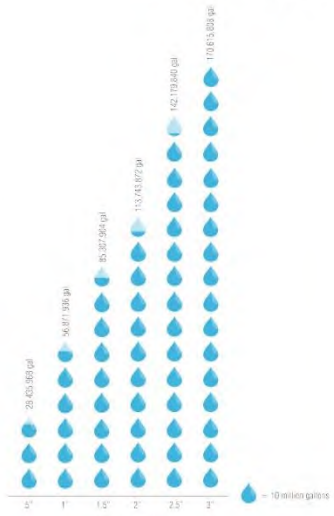
WHAT IS GREEN INFRASTRUCTURE?

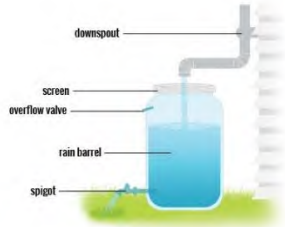
- **Green Infrastructure** is an approach to stormwater management that mimics the natural water cycle
- Helps prevent and delay water runoff from entering piped infrastructure, reducing the stress on combined sewer systems
- Neighborhood aesthetic amenity through creation of green space, street strees, gardens, etc.
- Our group plans to use a range of green infrastructure implementation as described below, as well as in our designs

PERVIOUS PAVEMENT

- Designed to allow water to infiltrate through the surface of the pavement where water is naturally filtered and pollutants removed
- An estimated total of **7,603,200 square feet** of standard impervious concrete sidewalk exists in Jersey City, this could be replaced with pervious pavement
- The diagram to the left describes how much water could be conserved throughout Jersey City based on our estimate, depending on the amount of rainfall







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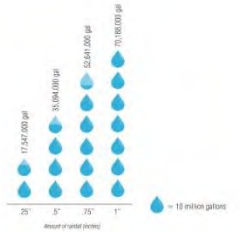

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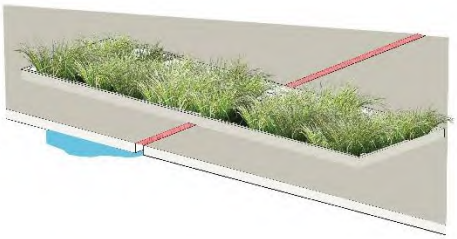
JERSEY CITY
DESIGN PROPOSALS

CSO EVENT REDUCTION
DESIGN INTERVENTION: 678 GRAND ST.

AMBER BETANCES / LORRI LINDSAY / CHRISTIE SALIBA

DECEMBER 2014

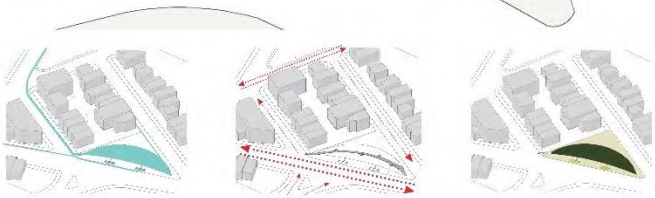
A Plan: 678 Grand St.



678 Grand St.

This site covers about 7,067 sq ft. or .16 arces it is located on a residential street that intersects a commercial road. The conditions of the site are in much need of repair. The site is on a sloping street and has a sewer drain right at the point of the site, making it a perfect candidate for rainwater collection.

The design allows this area to be fully used for stormwater collection while providing an asthetically pleasing environment that welcomes the people of this community. It can be used as a walkway or a place for people to sit and enjoy their surroundings. This design rejuvenates the neighborhood while creating a susitanible and educational environment for kids and adults.



Stormwater Diagram

Circulation Diagram

Green Infrastructure Diagram

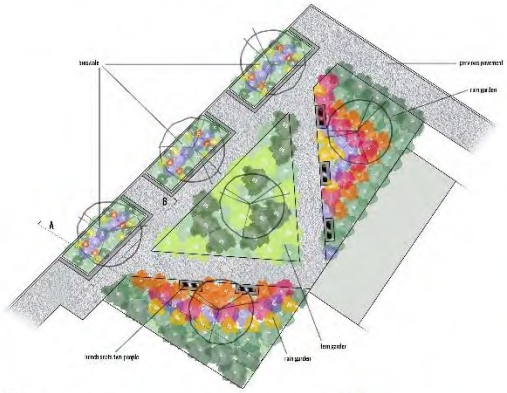
B Section: 678 Grand St.

JERSEY CITY
DESIGN PROPOSALS

CSO EVENT REDUCTION
DESIGN INTERVENTION: 43 BELMONT AVE

AMBER BETANCES / LORRI LINDSAY / CHRISTIE SALIBA

DECEMBER 2014



planting legend

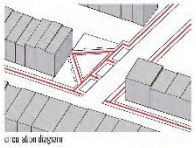
- cinnamon fern, Osmunda cinnamomea
- royal fern, Osmunda regalis
- sensitive fern, Onoclea sensibilis
- switchgrass, Panicum virgatum
- swamp milkweed, Asclepias incarnata
- virginia sweetspire, Itea virginica
- soft rush, Juncus effusus
- horsetail, Equisetum species
- blue indigo, Baptisia australis
- butterfly weed, Asclepia incarnata
- boneset, Eupatorium perfoliatum

0 Plan: 43 Belmont Ave

43 BELMONT AVENUE, JERSEY CITY

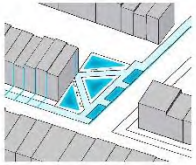
The site covers 5900sf on a corner of vacant land, and is currently abandoned in a dense residential area in the neighborhood of Bergen-Lafayette.
The lot is relatively flat, and is covered with visually unpleasing overgrown grass without trees and is currently contributing little to the community.

The proposed design makes an attempt to make the site 100% pervious, welcoming the perculation and infiltration of incoming stormwater.



circulation diagram

program diagram
rain garden
bioswale



water collection diagram

A Section: 43 Belmont Ave

B Section: 43 Belmont Ave

GOOGLE EARTH

Jersey City
Environmental Resources

2015

Created by: A. L. BETANCES, M. W. BOWMAN, R. F. CONTI, J. M. FOSS, S. IN HONG, M. R. LIM, K. LIVSHITS, S. N. MARTINEZ, L. M. MATUSIAK-LINDSAY, A. MUSSO, B. ROBLES, J. RODRIGUEZ, C. A. SALIBA, A. P. SCHENKER, A. P. SCOTT, K. A. TAYLOR, A. J. THESING, S. M. THOMSON

Under the Direction of: D. C. Smith and J. M. Hartman

In partial completion of requirements for Intermediate Landscape Architecture I (11:550:331, Fall 2014)

Department of Landscape Architecture
93 Lipman Drive
School of Environmental and Biological Sciences
Rutgers, The State University of New Jersey
New Brunswick, NJ 08901-8524

We would like to acknowledge the assistance of Marcus Knowlton, for help with production of all these materials. Both the Department of Landscape Architecture and the Center for Urban Environmental Sustainability supported our course and travel costs. The Jersey City Planning Office, especially Bob Cotter, provided much of the data used in the GIS analysis presented in this report. The Jersey City Environmental Commission has been generous with time and information.

Finally, we would like to acknowledge Peter Basso who originally suggested this project.

Recommended Citation:

Center for Urban Environmental Sustainability. 2015. Jersey City Environmental Resources. 48pp.

Table of Contents

Jersey City is in New Jersey's Watershed Management Area 5 and within four sub watersheds:

Hackensack River,

Hudson River,

New York Bay, and

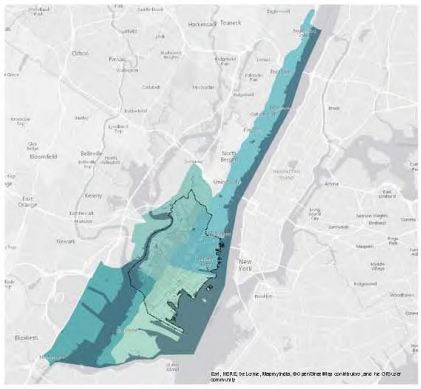
Newark Bay.

This map shows many petroleum cleanup sites located around the water's edge as well, as previously talked about how many sites along this area were contaminated.

By understanding the hydrology, alternatives to reduce the impacts of Combined Sewer Overflows.

Alexis Schenker / Christie Saliba / Karina Livshits

October 2014



Contextual overview of the Hackensack River, Newark Bay subwatersheds, showing the extent of the Watershed Management Area 5: Hackensack, Hudson, Pascack watershed boundary.

Discharge areas are distinguished depending on the type of contamination found at each point. **Cooling water** discharge areas contain water which have not come into contact with the process operations of a facility, but used to reduce temperature of the processes. **General remediation cleanups** are locations that treat and discharge groundwater from installation of drainage utilities. **Industrial/commercial** discharges may contain waste materials and debris. **Petroleum cleanup** locations are petroleum contamination remediation sites. **Stormwater/surface water** discharges occur when there is an abundance of stormwater in the systems.

Four subwatersheds lie within the greater watershed, the Watershed Management Area 5 (WMA 5). Subwatersheds are consisted of the Hackensack River basin, Hudson River basin, New York Bay Basin, and Newark Bay Basin.

0 0.25 0.5 1 1.5 2 Miles

N

- Cooling Water
- General Remediation Cleanup
- Industrial/Commercial
- Petroleum Cleanup
- Stormwater/Surface Water
- Water Bodies
- Hackensack River
- Hudson River
- New York Bay
- Newark Bay
- Roadways
- Streams

<Hydrology> provided by <NJDEP>
<CSO> provided by <NJDEP>
<Street Grid> provided by <NJDEP>
<CSO Info> provided by <http://www.epa.state.oh.us/portals/35/permits/NCCW_factsheet_oct10.pdf> < http://www.epa.gov/region1/npdes/remediation/no//2006/CityofgloucesterGP.pdf>

Geology is very important to the physical form of Jersey City.

The diabase that runs through the center which is similar to sub volcanic rock, which composes what we call The Palisades Sill. This area is difficult to build upon because of the very hard character of the bedrock, which is very close to the surface.

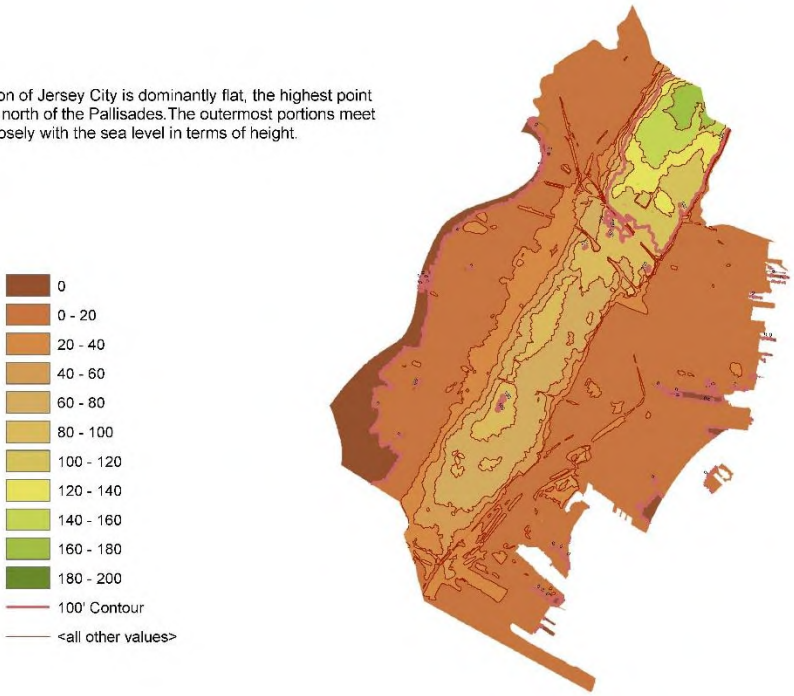
The elevation map shows that much of Jersey City is quite flat. Notice how the shape of the gray and dark brown areas, on the geology map, resemble the shape of the highest topography. This is the southern tip of the Palisades - a line of steep cliffs along the west side of the lower Hudson River. It includes the highest point in the city, at about 200 feet.

Alexis Schenker / Christie Saliba / Karina Livshits

October 2014

The geology map displays it's importance to other maps for potential uses and references to watersheds, CSO's, development, and areas with potential for construction. The central area of the Pallisades contains a diabase, which is similar to subvolcanic rock, showing that there is little potential for development in this area. The sandstone shows areas for potential aquifers and good porosity.

The elevation of Jersey City is dominantly flat, the highest point being in the north of the Pallisades. The outermost portions meet closely with the sea level in terms of height.



<Elevation map> provided by < R:/331_RegionalStudio/Z_BaseData/Elevation.gdb>
<Geology data> provided by < NJDEP >

The significance of the geology information is reinforced by these maps.

The red areas, in the map in the upper left hand corner, show where there has been significant fill added and reminds us that much of Jersey City was wetlands until the industrial age. When we compare the patterns seen in the geology and fill maps, with the soil map, similarities persist.

The soils map is critical in locating wet sub-soils and areas where soils have very low permeability because of high clay content. Some of the areas and soil types with these characteristics are indicated with the red arrows. They are quite common.

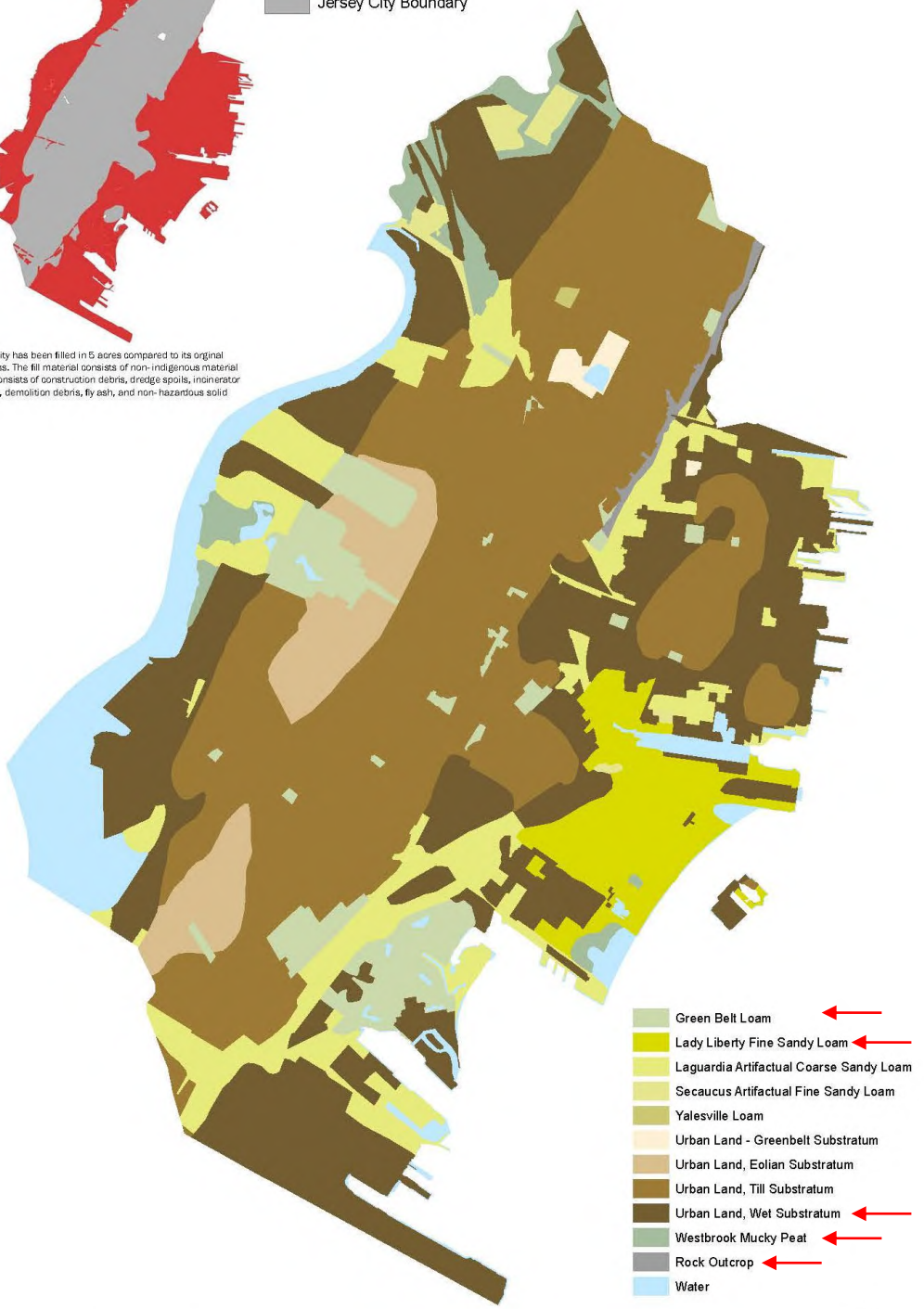
Both of these characteristics can exacerbate stormwater run-off rates that lead to CSO contamination because they indicate surfaces that are not able to absorb rain.

Alexis Schenker / Christie Saliba / Karina Livshits

October 2014

Fill
Jersey City Boundary

Jersey City has been filled in 5 acres compared to its orginal landmass. The fill material consists of non-indigenous material which consists of construction debris, dredge spoils, incinerator residue, demolition debris, fly ash, and non-hazardous solid waste.



0 0.45 0.9 1.8 2.7 3.6 Miles

N

<Soils > provided by < Web Soil Survey >
<Fill> provided by <NJDEP Historic Fill>

This map presents the broad land cover categories, such as forest or residential.

The graph and the map both reflect the fact that residential land use is as common as industrial and commercial land use.

It also shows that land use for transportation covers nearly as much of the city as the combined categories of recreation, forests, and cemeteries.

This is one of several ways of representing the fact that Jersey City is densely built and includes relatively little permeable surface.

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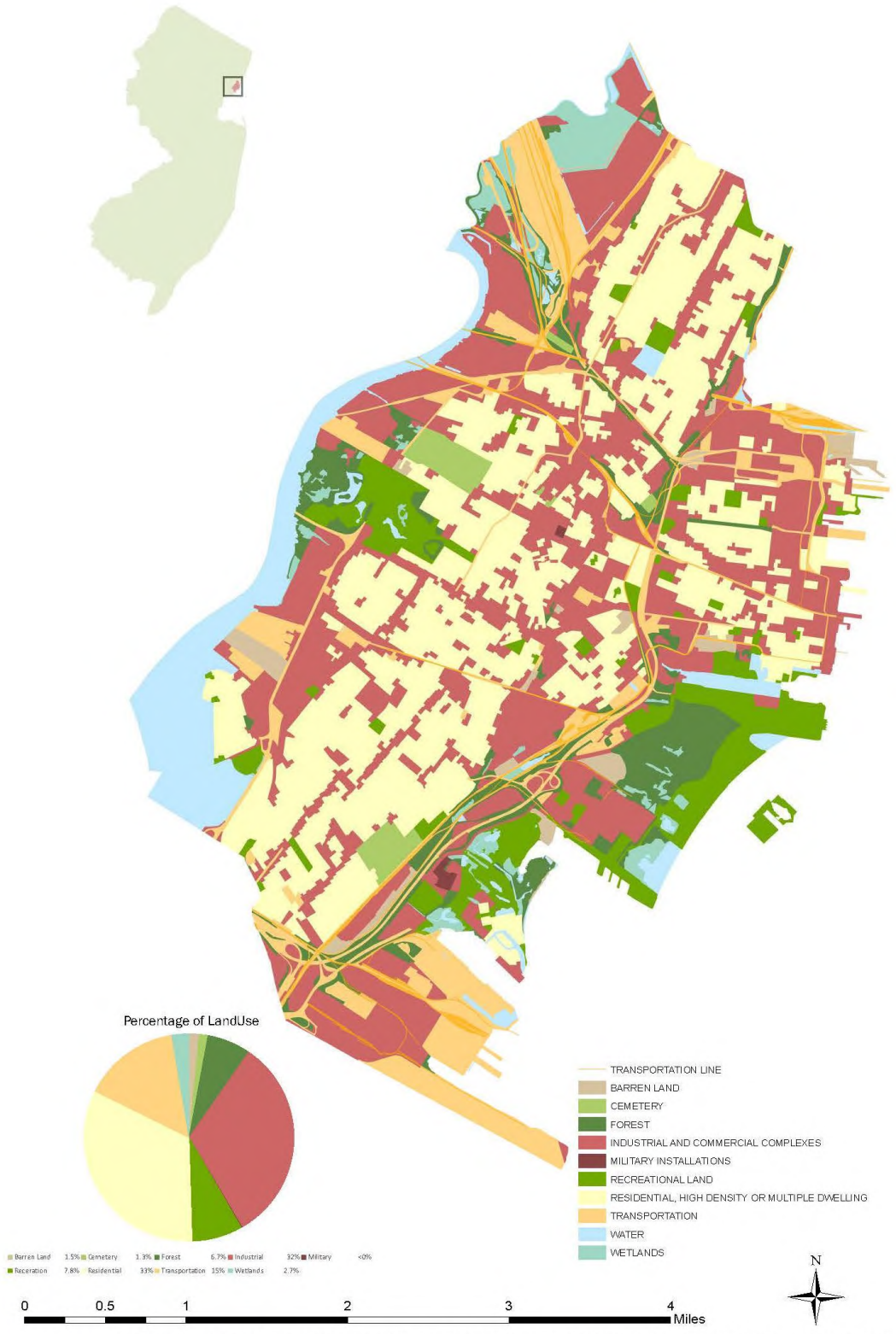
October 2014



<LULC.mxd> provided by <R:/331_RegionalStudio/Z_BaseData/LULC/07/GBD_revise/w05lu07.mdb/landuse/w05lu07>
<NJ_State_Boundary> provided by <NJDEP>

This map portrays the birds and fish species found along the waterfront. Some of the species are categorized as endangered. Because the area along the Morris Canal can provide habitat for the endangered species, they are shown in red.

The areas that are wetlands or forested or adjacent to open water tend to be the areas that are likely to support these species, because of habitat quality.

In addition, Jersey City is located along the route for the Atlantic Flyway Migration, showing potential for developing more wetland areas as habitats for these threatened species.

Alexis Schenker / Christie Saliba / Karina Livshits

October 2014

Atlantic Flyway Migration

The climate of Jersey City is generally a humid subtropical climate, with hot summers and cold winters.

The Atlantic Flyway is the bird migration route along the Atlantic Coast and Appalachian Mountains. About 40% of bird species often found in the migration route are birds of special concern and/or conservation needs. Jersey City is one of the cities included in this migration pattern.

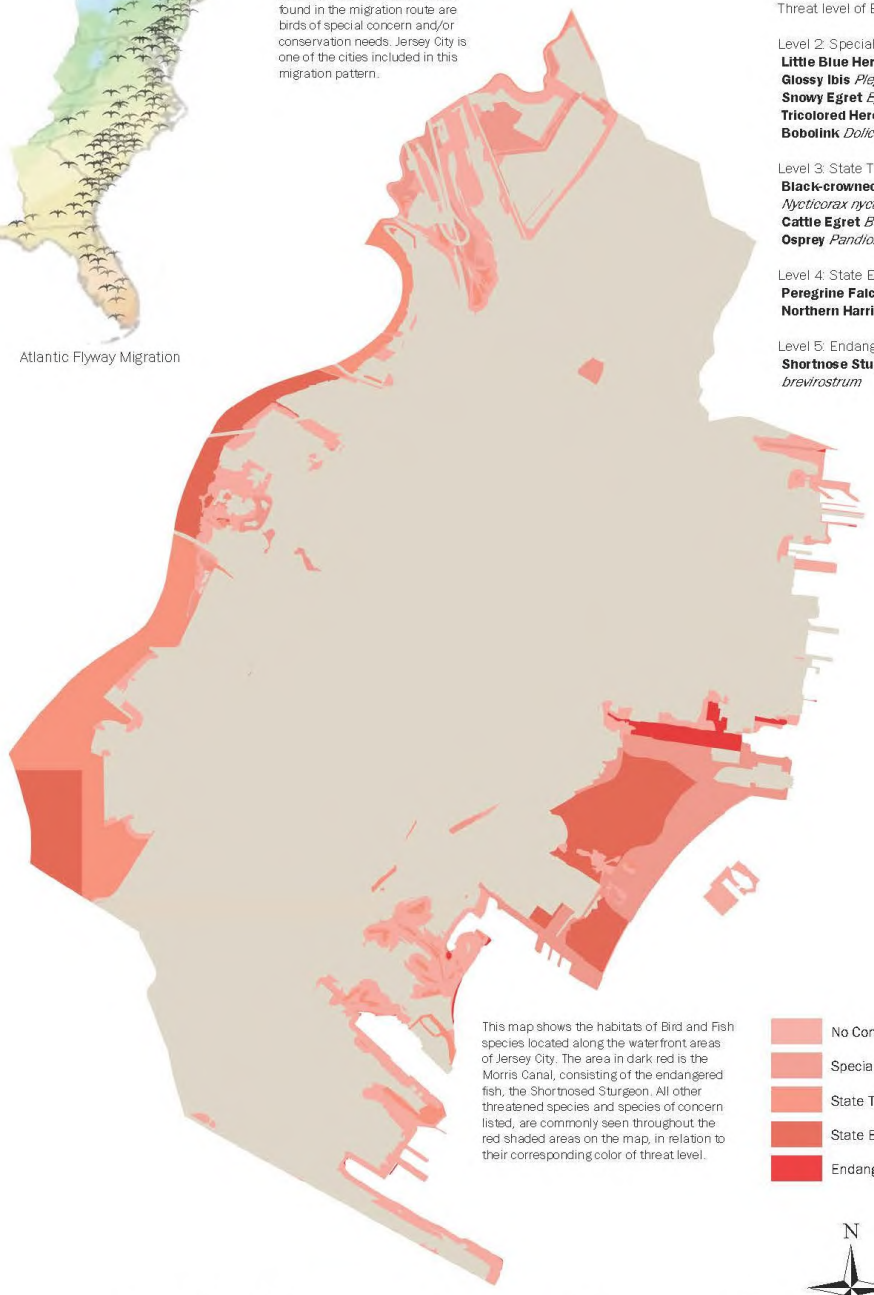
Threat level of Bird & Fish species:

Level 2: Special Concern
Little Blue Heron *Egretta caerula*
Glossy Ibis *Plegadis falcinellus*
Snowy Egret *Egretta thula*
Tricolored Heron *Egretta tricolor*
Bobolink *Dolichonyx oryzivorus*

Level 3: State Threatened
Black-crowned Night-heron *Nycticorax nycticorax*
Cattle Egret *Bubulcus ibis*
Osprey *Pandion haliaetus*

Level 4: State Endangered
Peregrine Falcon *Falco peregrinus*
Northern Harrier *Circus cyaneus*

Level 5: Endangered
Shortnose Sturgeon *Acipenser brevirostrum*



This map shows the habitats of Bird and Fish species located along the waterfront areas of Jersey City. The area in dark red is the Morris Canal, consisting of the endangered fish, the Shortnosed Sturgeon. All other threatened species and species of concern listed, are commonly seen throughout the red shaded areas on the map, in relation to their corresponding color of threat level.

No Concern
Special Concern
State Threatened
State Endangered
Endangered

N

0 0.425 0.85 1.7 2.55 3.4
Miles

<Atlantic Flyway Migration pattern> provided by <http://www.ducks.org/conservation/where-we-work/flyways/du-projects-atlantic-flyway>
<Atlantic Flyway description> provided by < http://conservation.audubon.org/atlantic-flyway>
<Northeast Region Climate map> provided by <http://planthardiness.ars.usda.gov/PHZMWeb/#>
<Habitat> provided by <NJDEP>

As part of the inventory process, we compiled lists of the sites, monuments, buildings and neighborhoods that have historic significance.

This resource is exceptionally rich and reflect long term and ongoing efforts.

Amber Betances / Breanna Robles / Michelle Lim

November, 2014

Jersey City is full of wonderful historical elements. Whether they are houses, methods of transportation, buildings, or areas of land, all of these historical monuments add character. Some of the key, uncommon historical models are shown.

ARMBRUSTERS GREENVILLE SCHUETZEN PARK ca.1875

ARMBUSTERS SCHUETZEN PARK

Previously a thriving amusement park, Armbusters Schuetzen Park is now occupied by a Walgreens and was previously the site for Republic Container. Purchased in 1875, the park was noted for its social and athletic events and outings. The park was located along Kennedy Boulevard, between Gates and Seaview Avenues.

PAULUS HOOK FROM HARSIUMUS FROM IN 1893

CAR AND PASSENGER ELEVATOR

Car and passenger elevators were well used during the late 1800s. They were used to carry both cars and their drivers up or down from varying steep heights where roads were practically impossible to drive on.

JOURNAL SQUARE

Before it became a commercial district, Journal square was the site of many farmhouses and manors. The square was created in 1923 when the newspaper company *Jersey Journal* established itself in the area. Currently Jersey City is undergoing much redevelopment.

4th REGIMENT OF NATIONAL GUARD ca.1869

PAULUS HOOK

Paulus Hook is currently one of the most desireable neighborhoods in Jersey City. It was colonized in 1633 and was a prime location during the American Revolution.

FOURTH REGIMENT ARMORY

Located at 678 Montgomery Street near McGinley Square, the Fourth Regiment Armory burned down in 1927. It was replaced by the Jersey City Armory ten years later, and is now a military training and mustering facility.

LOYAL ORDER OF THE MOOSE CLUBHOUSE

JERSEY CITY MEDICAL CENTER

Renamed in 1885 as the Jersey City Hospital, it has expanded and has been renovated. In 1988 it was declared bankrupt and became a private, non-profit organization.

LOYAL ORDER OF MOOSE

Founded in 1888, the Loyal Order of Moose is a fraternal and service organization, with Lodge 266 found in Jersey City .

ST. DOMINIC'S ACADEMY ca.1878

PATERSON PLANK ROAD

A road that runs through Passaic, Bergen, and Hudson Counties, Paterson Plank Road connects Paterson and the Hudson River waterfront, which still exists. It has largely been superceded by Route 3.

ST. DOMINIC ACADEMY

St. Dominic Academy is a private college-prepatory for girls. The school was founded in 1878 with the objective to educate children of immigrants, primarily German.

CAR AND PASSENGER ELEVATOR ca. 1873

JOURNAL SQ. ca. 1940

JERSEY CITY MEDICAL CENTER ca. 1932

PATERSON PLANK RD. ca. 1908

PHOTOS AND INFORAMTION PROVIDED BY: JERSEY CITY LIBRARY NEW JERSEY ROOM
PHOTOS AND INFORMATION PROVIDED BY: SPECIAL COLLECTIONS AND UNIVERSITY ARCHIVES, RUTGERS UNIVERSITY LIBRARY

We can see a relationship to historic settlement patterns and landfilling to geology and early topography in the distribution of historic neighborhoods, parks, and landmarks.

In many ways, Jersey City retains a rich record of their history

their landmarks represent culture and industry
the positions and local patterns of residential districts indicate distinct periods of growth
their places of worship catalogue the cultures of their immigrants

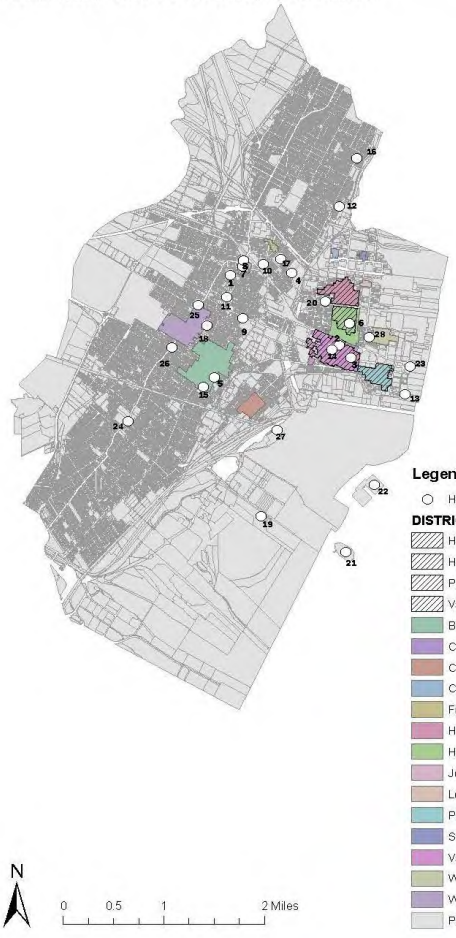
This is a very valuable element among their environmental resources. Efforts to protect and energize this resources must continue and grow, in order to retain the rich diversity and character of the city.

JERSEY CITY ENVIRONMENTAL RESOURCE INVENTORY

HISTORY
DISTRICTS AND SITES

AMBER BETANCES / BREANNA ROBLES / MICHELLE LIM

October 2014



CURRENT HISTORIC DISTRICTS

Hamilton Park - Jan. 25, 1979
Located in the Downtown area, Hamilton Park is centered around a park of the same name. It is located around 6th, 7th, 8th, and 9th streets at Hamilton Park. It was added to the National Register of Historical Places in 1979.

Harsimus Cove - Dec. 9, 1987
A neighborhood within Downtown, Harsimus Cove includes portions of Jersey Ave., Bay, Cole, Erie, First, Second, Third, Fourth, and Fifth streets, as well as Manila Drive. This area was greatly transformed by the

Paulus Hook - June 21, 1982
This waterfront community consists of portions of York, Grand, Sussex, Morris, Essex, Greene, Washington, Warren, and Van Vorst streets or avenues. This area played an important part in the American Revolution in 1776.

Van Vorst Park - March 5, 1980
This historic area is roughly bounded by Mercer, Wayne, Montgomery, Grove, Bright, Varick, and Monmouth Streets, with a boundary increase in 1984. . The neighborhood consists of nineteenth century rowhouses and brownstones. Many streets have the names of American Revolution military figures.

EXISTING HISTORICAL SITES

1 **APPLE TREE HOUSE**
298 ACADEMY STREET
1688

2 **DR. WILLIAM BARROW MANSION**
83 WAYNE STREET
1860 - 1862

3 **JERSEY CITY CITY HALL**
280 GROVE STREET
1896

4 **WILLIAM L. DICKINSON HIGH SCHOOL**
2 PALISADE AVE
1906

5 **FICKEN'S WAREHOUSE**
766 GRAND STREET
1910

6 **GRACE VAN VORST CHURCH**
39 ERIE STREET
1853

7 **LABOR BANK BUILDING**
26 JOURNAL SQUARE
1928

8 **LOEWS JERSEY THEATRE**
54 JOURNAL SQUARE
1929

9 **JERSEY CITY MEDICAL CENTER**
50 BALDWIN AVE
1882

10 **NEWKIRK HOUSE**
510 SUMMIT AVE
1690

11 **OLD BERGEN REFORMED CHURCH**
797 BERGEN AVE
1841

12 **POHLMAN'S HALL**
154 OGDEN AVE
1884

13 **PROSPECT HALL**
END OF ESSEX STREET
1807

14 **JERSEY CITY PUBLIC LIBRARY**
472 JERSEY AVE
1891

15 **ST. PATRICK'S CHURCH**
492 BRAMHALL AVE

16 **VAN VORST HOUSE**
531 PALISADE AVE
1740

17 **WILLIAM F. BRENNAN COURTHOUSE**
575 NEWARK AVE
1910

18 **Y.M.C.A**
654 BERGEN AVE
1925

19 **LIBERTY STATE PARK**
200 MORRIS PESIN DRIVE

20 **ST. ANTHONY OF PADUA R.O. CHURCH**
457 MONMOUTH STREET

21 **STATUE OF LIBERTY**
UPPER NEW YORK BAY
1886

22 **ELLIS ISLAND**
UPPER NEW YORK BAY
Main Building - 1900

23 **EXCHANGE PLACE**
FOOT OF MONTGOMERY STREET

24 **NEW JERSEY CITY UNIVERSITY**
2039 JFK BLVD
1929

25 **FAIRMOUNT HOTEL**
2595 JFK BLVD
1909 - 1912

26 **STANLEY THEATER**
2392 JFK BLVD
1928

27 **LIBERTY SCIENCE CENTER**
222 JERSEY CITY BLVD
1993

28 **GREAT ATLANTIC AND PACIFIC TEA COMPANY WAREHOUSE**
150 BAY STREET
1900

Historical site photographs provided by http://www.jclandmarks.com/
Historical district photographs provided by http://www.cityofjerseycity.org/docs/neighborhoods.shtml
GIS Map of districts and sites provided by NJDEP

The Jersey City Green Map (http://www.greenmap.org/greenhouse/user/1825 & http://sustainablejc.org/wordpress/jc-green-map/) provides a very broad record of open space, markets that sell local products, bike paths, and places that are implementing or developing new sources of energy.

This map used the Jersey City Green Map and resources such as news articles, to document the growing "greenness" of Jersey City.

We did not find a record of rich storm water management best practices such as bioswales, rain gardens, treatment wetlands, that would be important to the overall green infrastructure of Jersey City. We propose this as an important area for improvement.

Green Infrastructure

Legend

Category

- Eco-Friendly House
- Green Building
- Green Building/ Geothermal/Ground Heat Site
- Green Roof
- Green Technology
- Greenhouse Gas Reduction
- Paper Reduction Site
- Solar Technology
- Park
- Open Space
- Roads
- Jersey City

N

0 0.3250.65 1.3 1.95 2.6
Miles

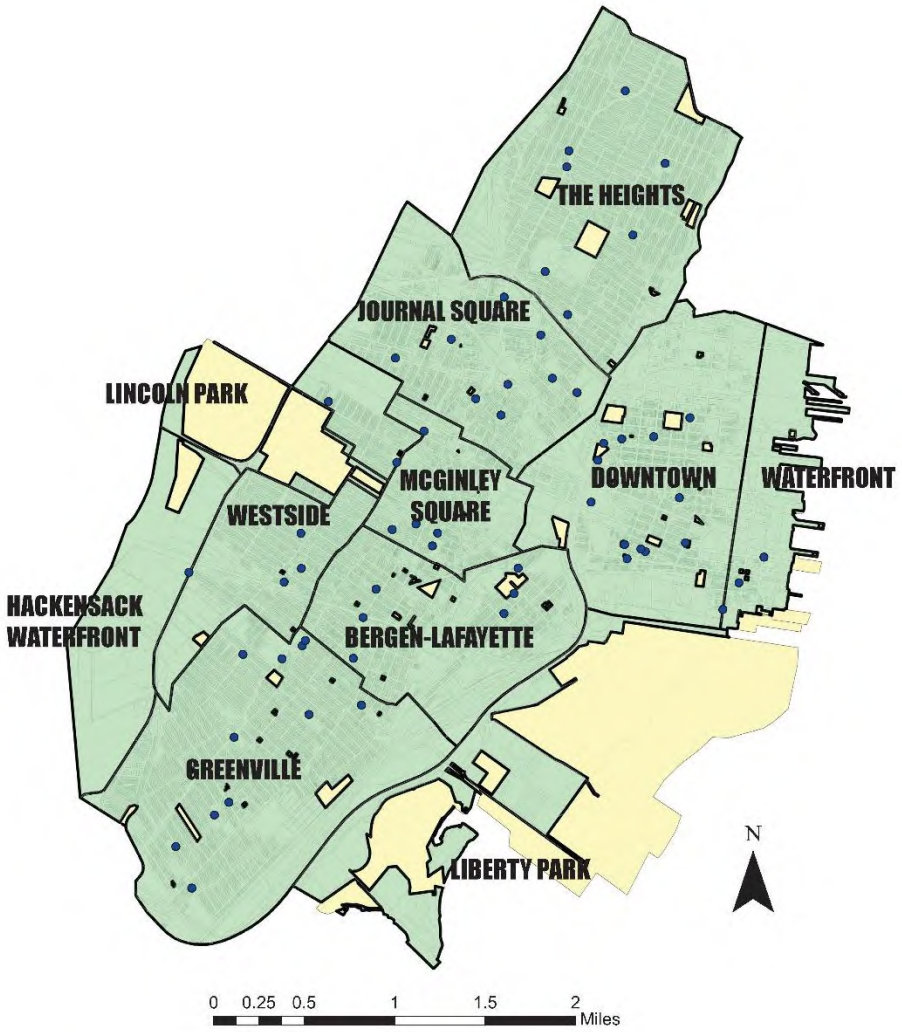
The environment of a place includes the humans that populate it. Using 2010 census data, we looked at Jersey City by neighborhoods.

We found a number of neighborhood descriptions and boundaries. We chose to use this one because we could associate census data specific to these neighborhoods.

You may notice that major open spaces are shown in yellow. We removed major open spaces when we calculated population densities.

Matt Bowman / Laura Lindsay / Alex Thesing

November 2014



Parcels provided by Jersey City
Roads provided by NJDOT
Neighborhoods provided by Administation and Demographics Team
Buildings provided by Administration and Demographics Team

These graphs summarize information about the population of Jersey City by neighborhood. Each neighborhood is assigned a distinct color, as show at the top of the page.

The first four graphs are common descriptors of population:

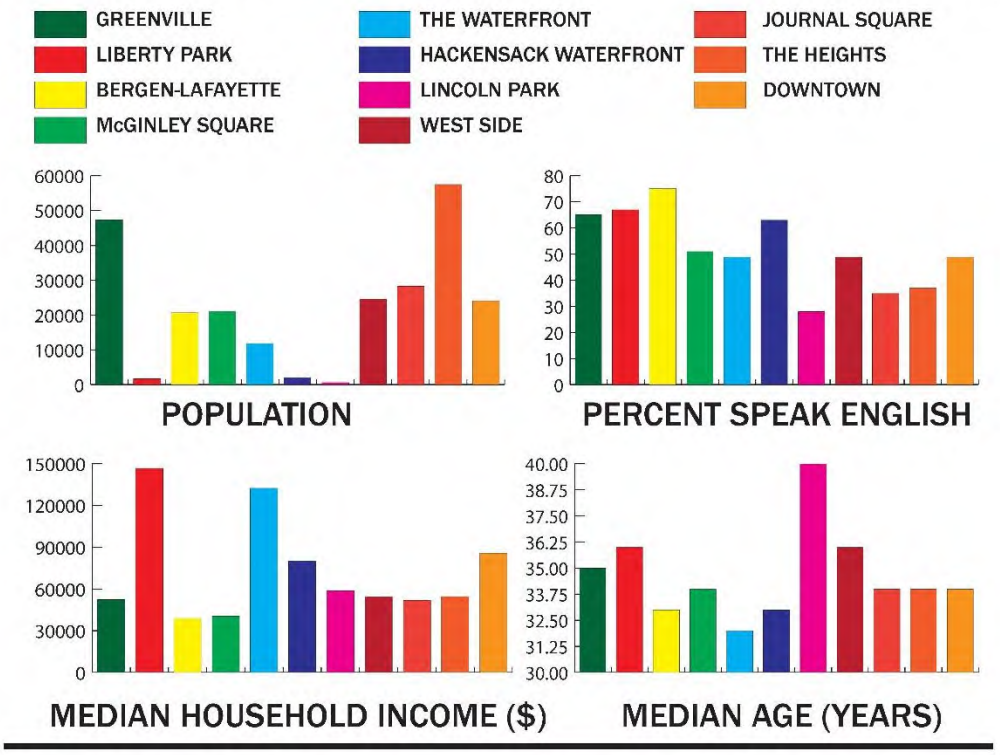
- Number
- PerCent of Households where English is spoken
- Median Income and
- Median Age of Head of Household

Remember that a median is the value at which one half of the population is above and one half is below. (It is different than average – an average kind hide poverty if there are a few extremely rich households.)

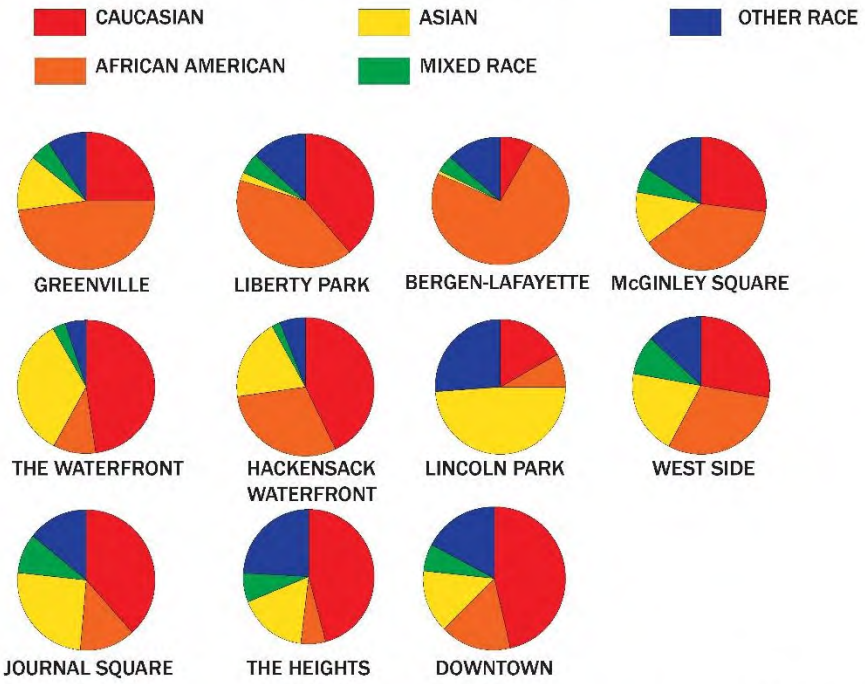
The pie or circle graphs show race information. (Caucasian is another term for white.)

Matt Bowman / Laura Lindsay / Alex Thesing

November 2014



NEIGHBORHOOD DIVERSITY



Data provided by US Census
Charts and Graphs provided by Administration and Demographics Group

The proportion of races within a neighborhood is often used as a way of indicating diversity.

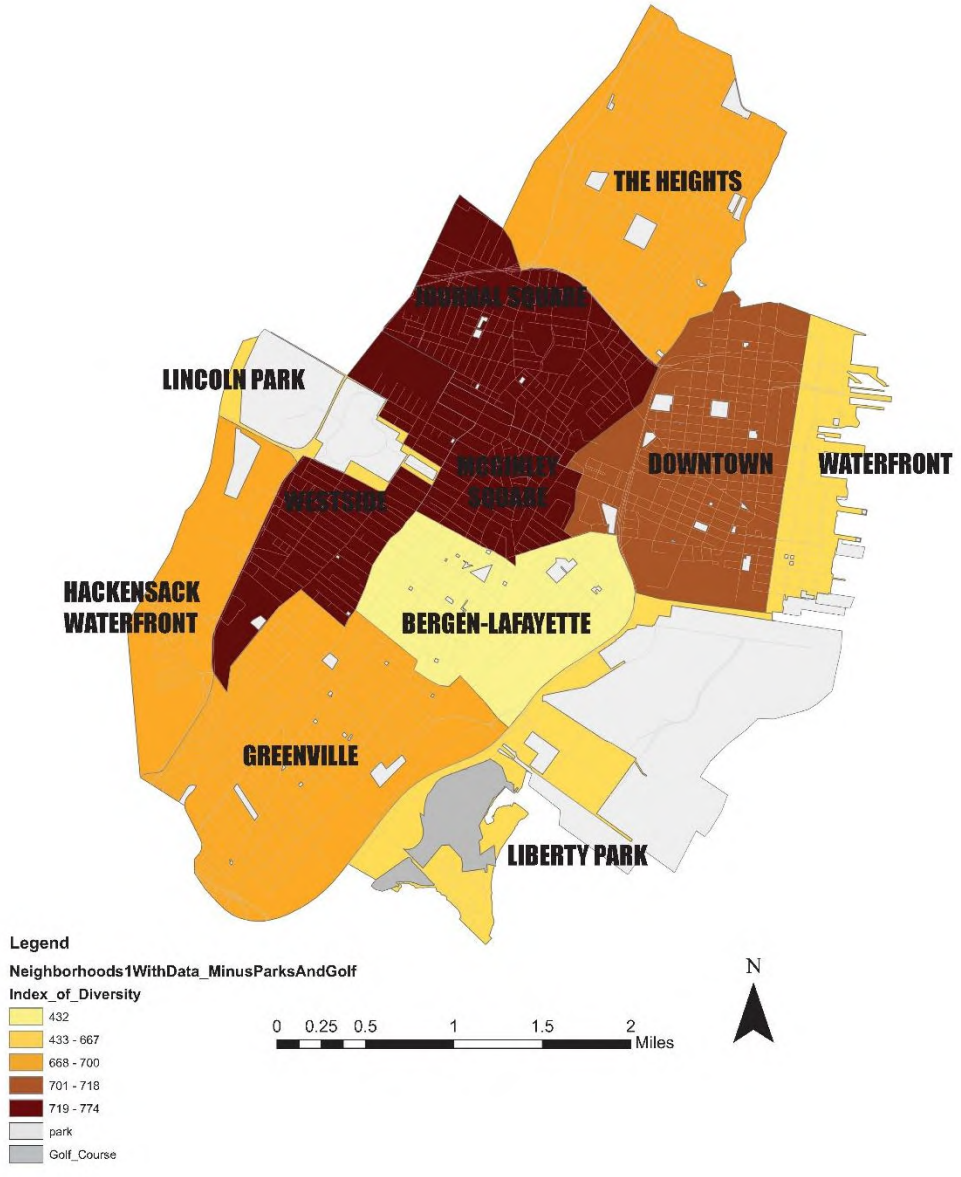
We borrowed an information index that is used in ecology to better summarize the diversity data. The index is the Simpson's Index of Diversity. In this case it can be defined as:

> *a measure of diversity which takes into account the number of races present, as well as the relative abundance of each race. As the number of races and evenness in their proportions increase, so diversity increases.*

In this map, the communities that are shown in dark brown have the highest diversity. The neighborhoods with light yellows are strongly dominated by a single race.

Matt Bowman / Laura Lindsay / Alex Thesing

November 2014



Roads provided by NJDOT
Neighborhoods provided by Administation and Demographics Team
Diversity provided by Simpsons Diversity Index

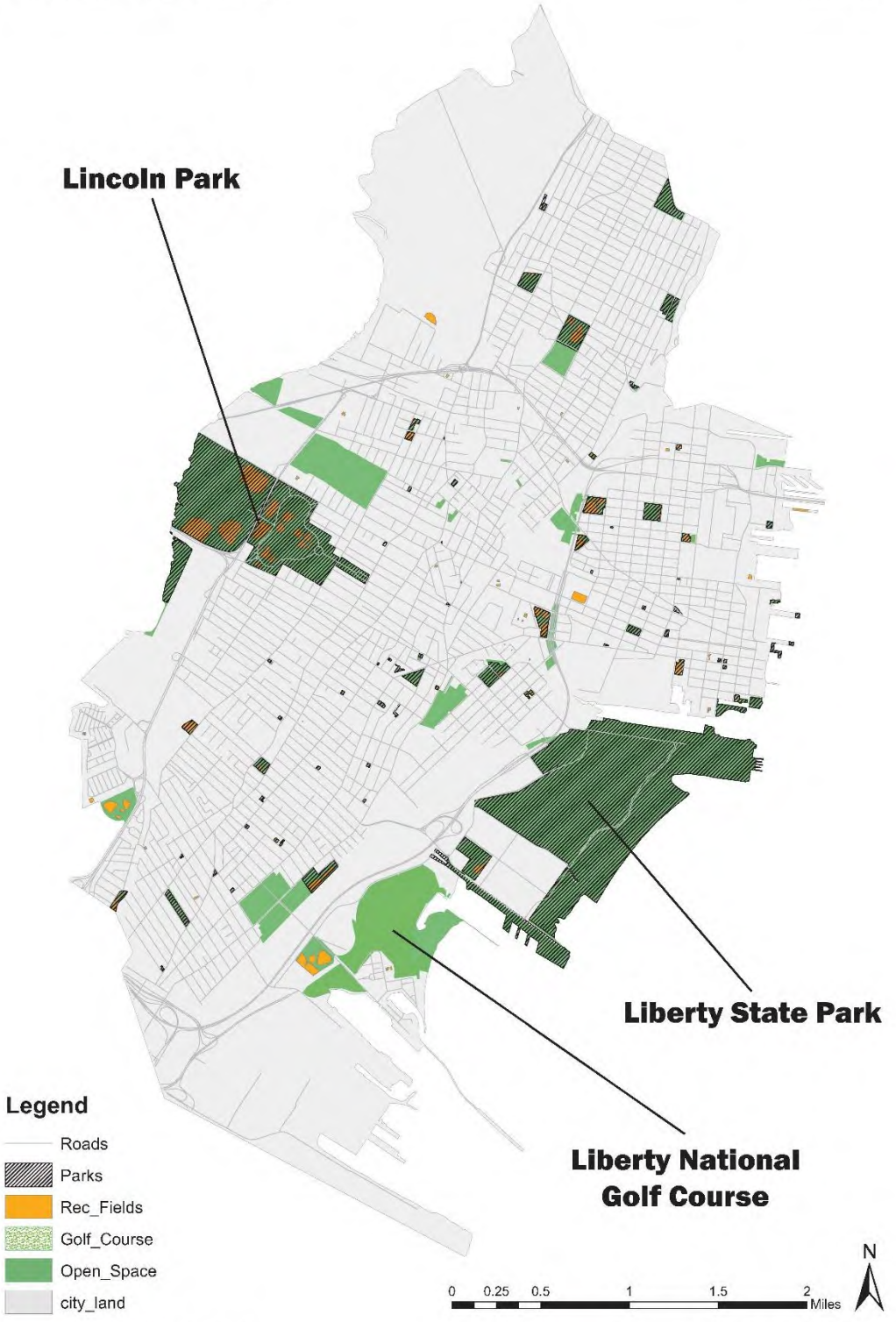
Parks and open space are often correlated with community health. The presence of large parks like Liberty State Park and Lincoln Park bring over all ratios between population size and acres of park into a good range. That is, in 2011 the Trust for Public Land City Park Inventory found a population:park space ratio showed an average of 2756 people per acre of park. Our current data shows that Jersey City has an above average ratio of about 1600 people per acre of park.

However, neighborhood park space is not readily available to large numbers of residents. Because of the way recreation activities are organized and distributed, we recommend further analysis that includes recreation facilities and neighborhood by neighborhood analysis.

We further encourage Jersey City to re-invigorate its efforts to follow up on the 2008 Parks and Recreation Master Plan or to update the Master Plan to reflect new additions and redevelopment plans.

Austin Scott / Josh Rodriguez / Kevin Taylor

October 2014



Jersey City Boundry provided by NJDEP
Roads provided by NJDEP
Open Space provided by NJDEP

Golf Course provided by NJDEP
Recreational Area provided by NJDEP
Parks provided by NJDEP

Street trees are very important in creating the fabric of the urban forest.

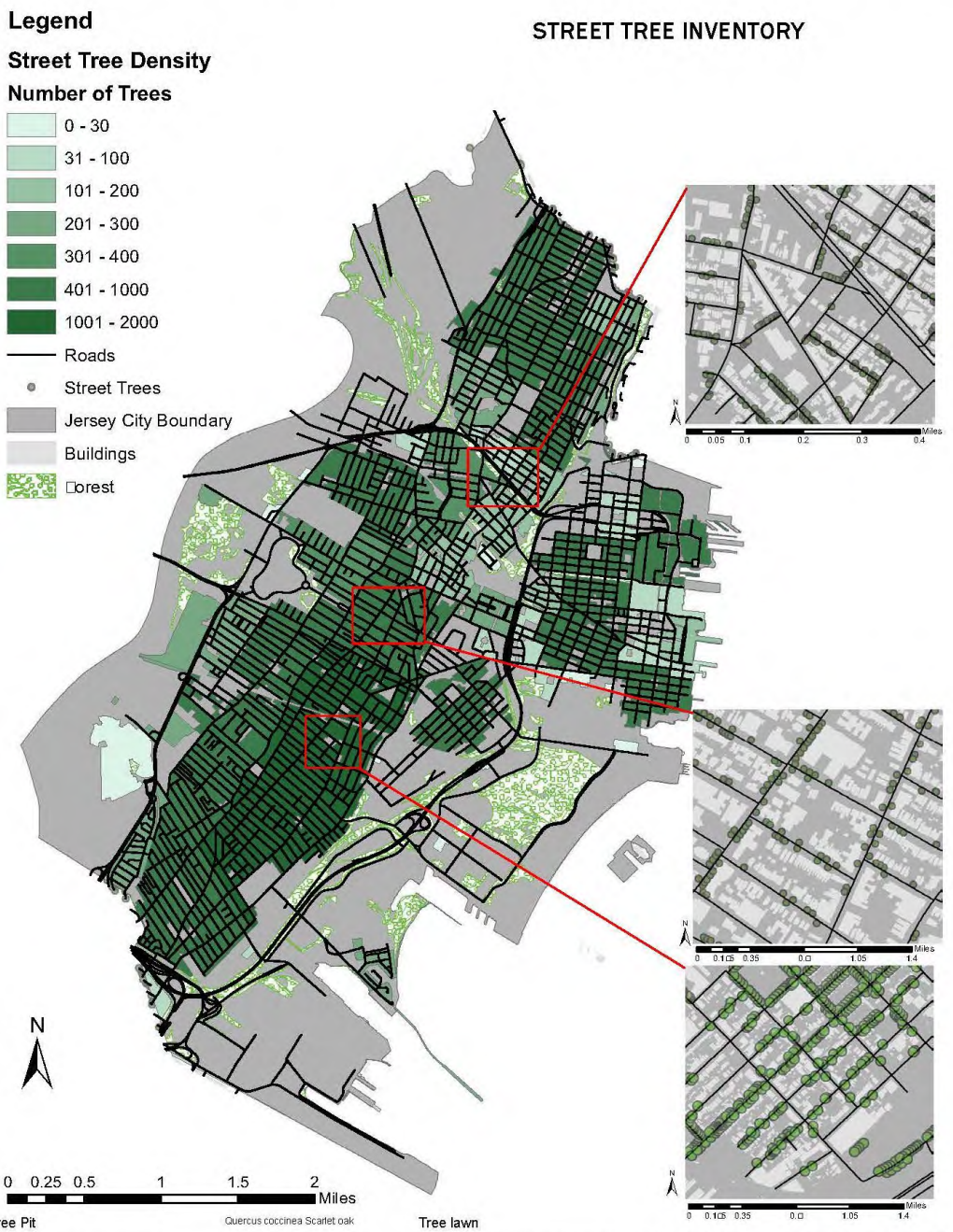
The current work on street trees and tree cover in Jersey City will help identify measureable goals for improvement.

For now, we show density of street trees in Jersey City with this map. Note how the enlargements of map sections on the right show uneven to even distribution of street trees in areas with low to high street tree densisty.

Austin Scott / Kevin Taylor / Joshua Rodriguez

October 2014

STREET TREE INVENTORY



Tree Pit

Carpinus caroliniana American hornbeam

Celtis occidentalis Hackberry

Nyssa sylvatica Black tupelo

(Quercus sp. require large tree pits - 5 ft. x 10 ft.)

Quercus alba White oak

Quercus bicolor Swamp white oak

Quercus coccinea Scarlet oak

Quercus palustris Pin oak

Quercus phellos Willow oak

Quercus prinus Chestnut oak

Quercus rubra Northern red oak

Quercus velutina Black oak

Tilia americana (needs shade) American linden,

Basswood

Tree lawn

Acer rubrum (Staten Island only) Red maple

Acer saccharum Sugar maple

Amelanchier arborea Serviceberry

Carpinus caroliniana American hornbeam

Celtis occidentalis Hackberry

Liquidambar styraciflua Sweetgum

Liriodendron tulipifera Tulip tree

Nyssa sylvatica Black tupelo

Ostrya virginiana American

Quercus alba White oak

The street tree analysis shown here depicts the density among neighborhoods shown in categories, high to low. High density refers to trees ranging from 1500 trees or more in a given acre, while neighborhoods with low density may only have as many as 15. These areas seemed to stick to only a certain amount of tree species overall such as the Heights, which featured mainly London Plane Trees. In addition to The Heights, there was a lack of trees in certain areas. This analysis can certainly advocate for more trees or better maintenance of the existing tree population in Jersey City.

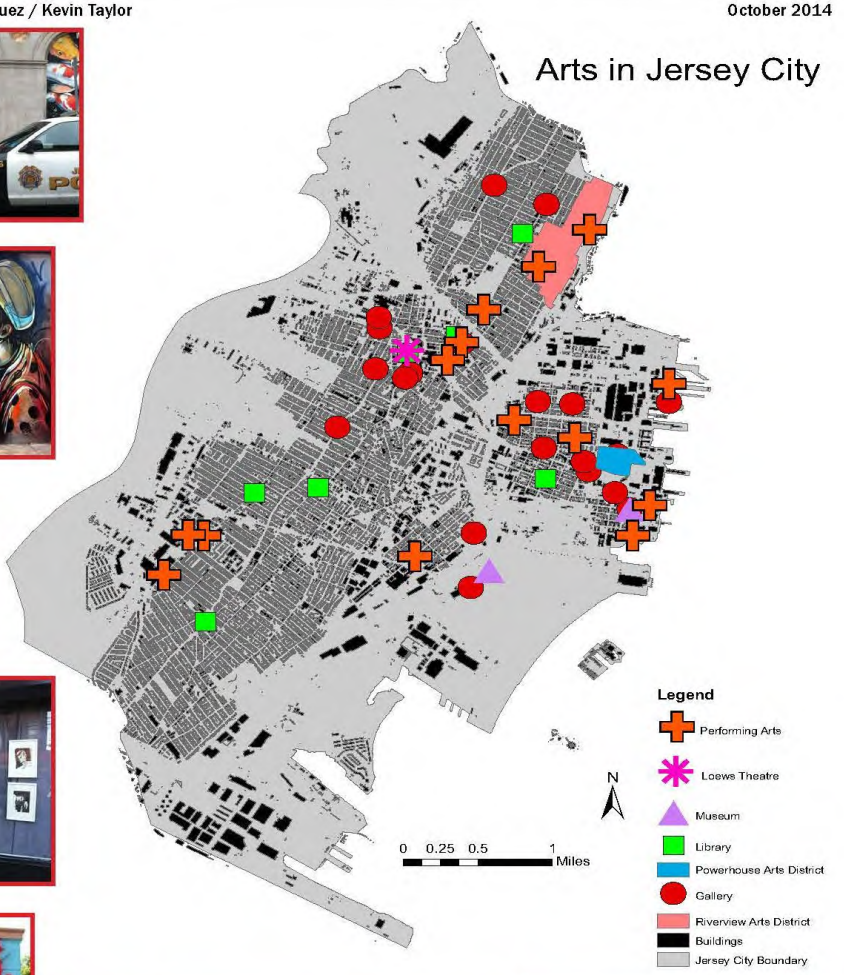
<Neighborhood Data Set> provided by <Jersey City Planning Board>
<Roads Data Set> provided by < Jersey City Planning Board >
<Street Trees Data Set> provided by <Jersey City Planning Board>
<Jersey City Boundary Line> provided by < Jersey City Planning Board >
<Jersey City Tree List> provided by < Native Species Planting Guide for NYC and Vicinity >

Both the history and location of Jersey City make it a good place for a thriving Arts Community.

Our inventory begins to show this, but better documentation and mapping could help grow this community.

Austin Scott / Josh Rodriguez / Kevin Taylor

October 2014

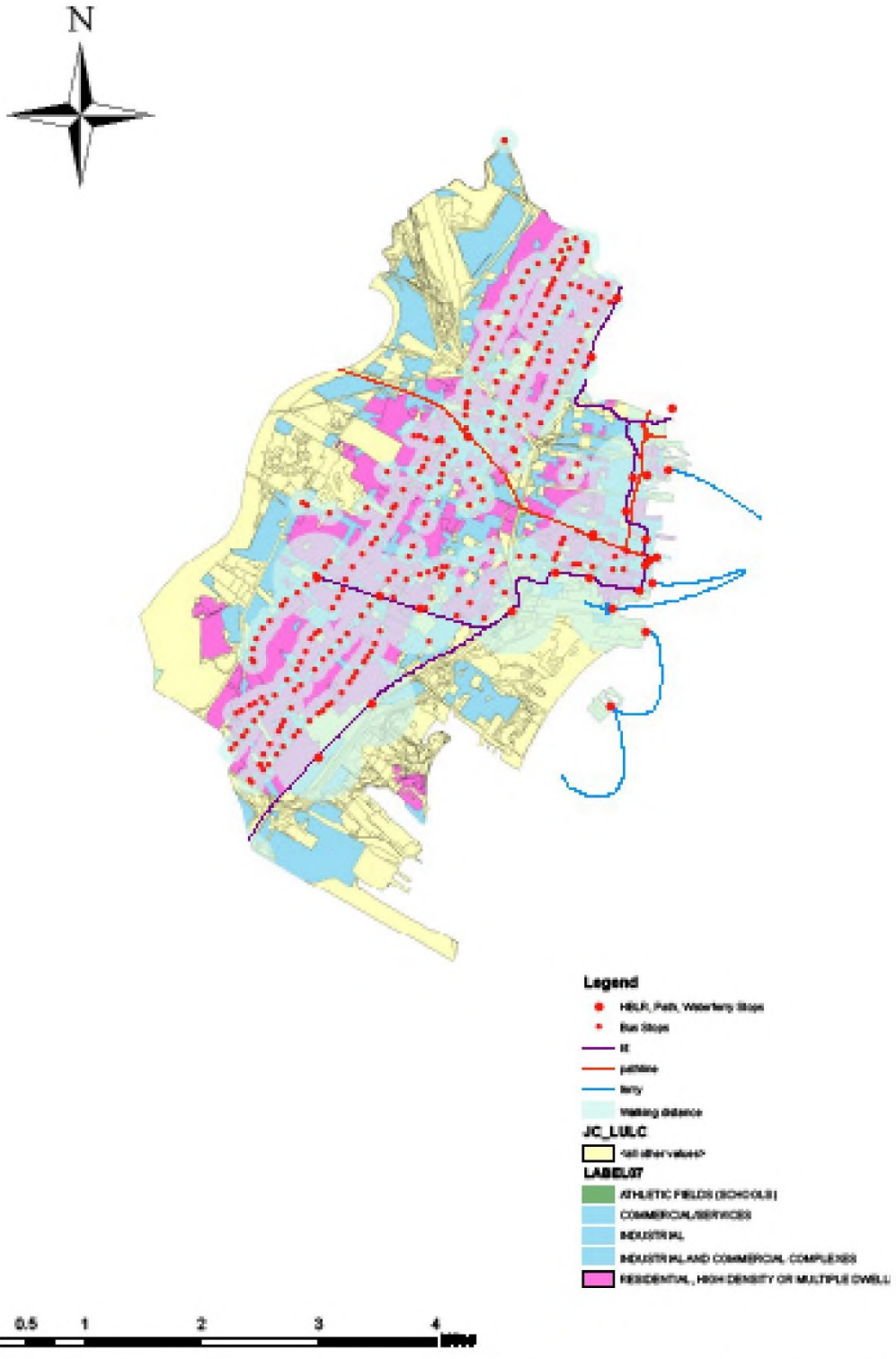


<Street Art Photographs> provided by <http://riverviewobserver.net/2010/11/wall-art-international-street-artist-turn-jersey-city-blight-into-priceless-art/>
<Library Data Set> provided by <Yelp>
<Museum Data Set> provided by <Yelp>
<Gallery Data Set> provided by <Yelp>
<Buildings Data Set> provided by <Jersey City Planning Board>
<Boundary Data Set> provided by <Jersey City Planning Board>
<Art Districts Data Set> provided by <Jersey City Planning Board>

Public transportation is essential to city function. There are ways that this has been recognized by Jersey City, but there is room for improvement that must accompany each re-development plan.

Seungin Hong/ Rich Conti/ Jon Foso

November 2014



<Land Use> provided by <Jersey City Planning Division>
<Transportation> provided by <NJDOT>

Schools are located in most areas of Jersey City. This map is organized by School District and education level.

Where we had addresses, private schools were included.

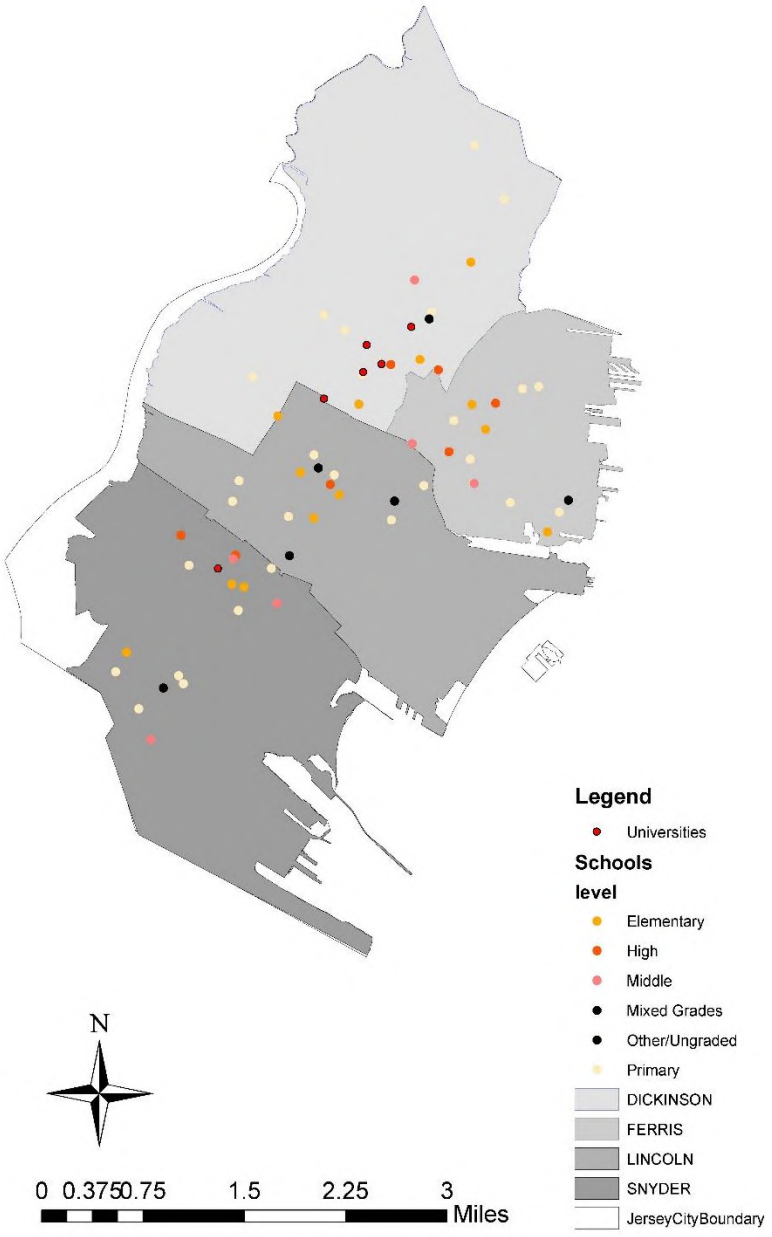
Additional study of the relationships between:

- population characteristics and school locations
- public transportation stops and school locations
- school curricula and school locations

might provide the Jersey City School Board with important insights.

Seungin Hong / Richard Conti / John Foss

November 2014



<Universities data> provided by <Google Map>
<schools and districts> provided by <Jersey City Planning Division>

There are 21 sites where combined sewer overflow outlets occur in Jersey City.

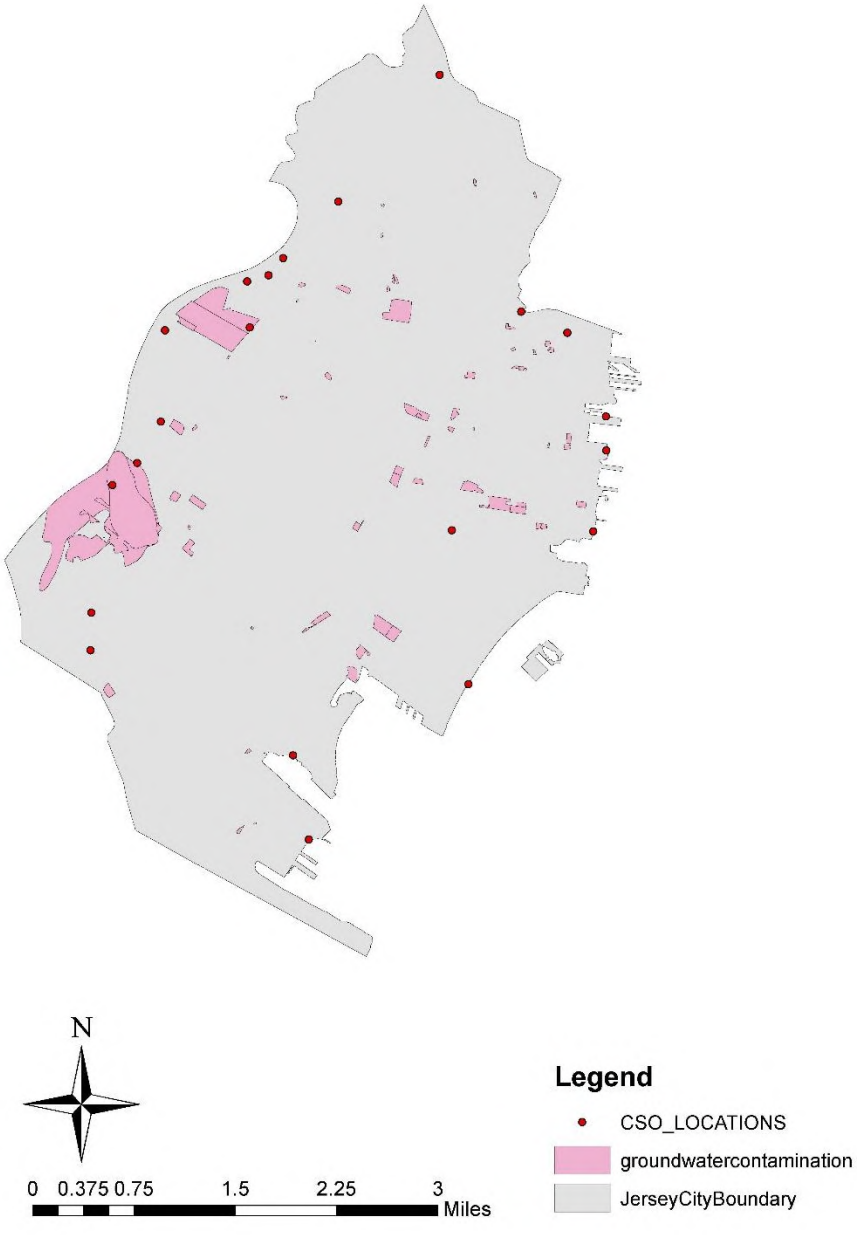
When storm water pipes flow into sanitary sewer pipes the two water flows can combine and overload, then bypass the water treatment facility. As a result, in many but the shortest rainfalls, sanitary sewer flows into the Hudson and Hackensack Rivers from Jersey City.

The Jersey City Municipal Utility Authority must develop programs to decrease, and eventually eliminate, these outfalls. Several kinds of solutions can be integrated in to development, redevelopment, and street repair programs. The first thing that needs to be done is to document when these outfalls occur and how much water is being discharged, for how long, without treatment.

Developing green infrastructure demonstrations can help the City decide how they want to manage storm water in the future.

Seugin Hong / Jon Foss /Rich Conti

November 2014

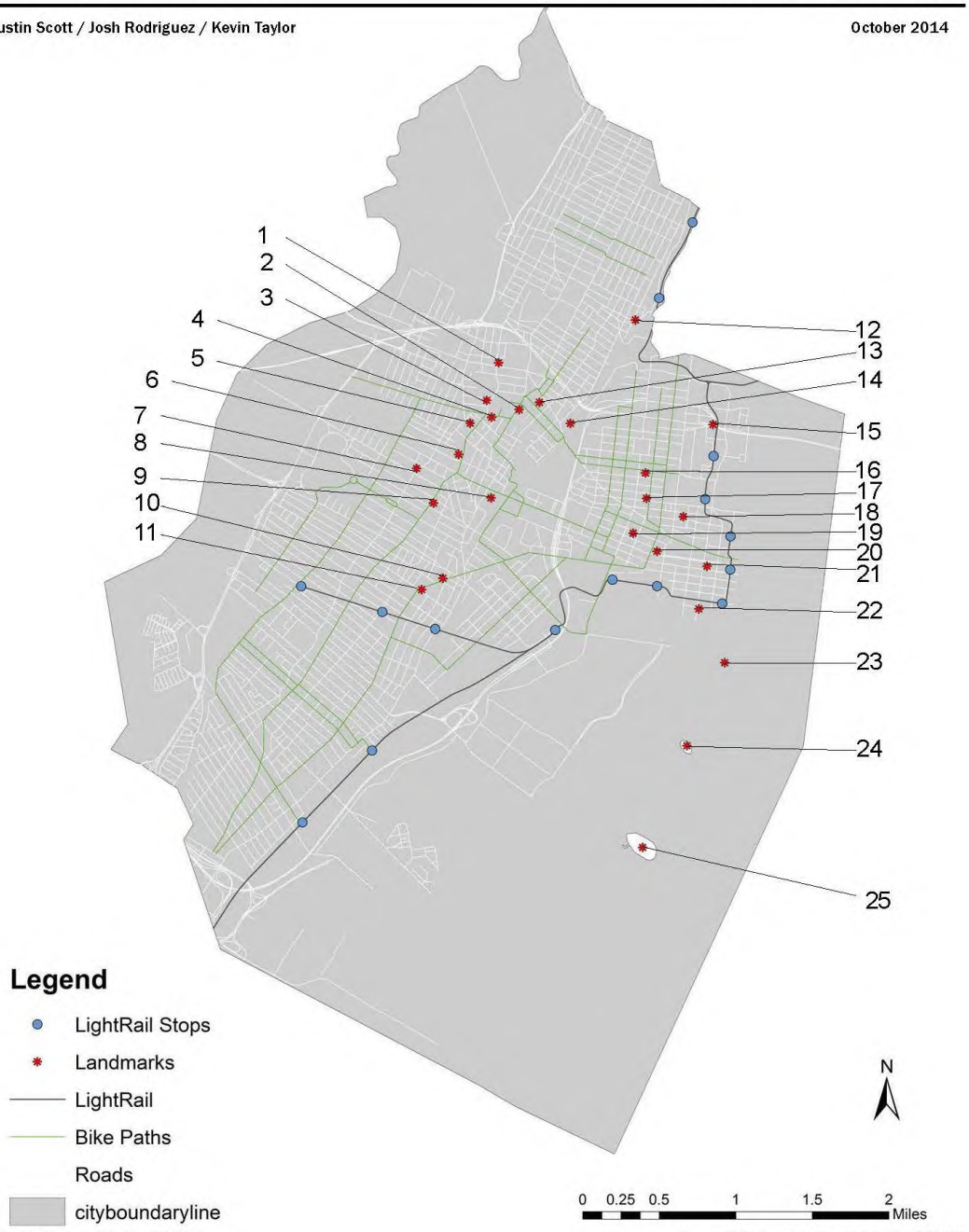


<CSO data and Ground contamination> provided by
<State of New Jersey Department of Environmental Protection CSM report for Jersey City, NJ.>

The following maps include a variety of resource information. Each deserves better documentation and further study of their importance and consequences.

Austin Scott / Josh Rodriguez / Kevin Taylor

October 2014



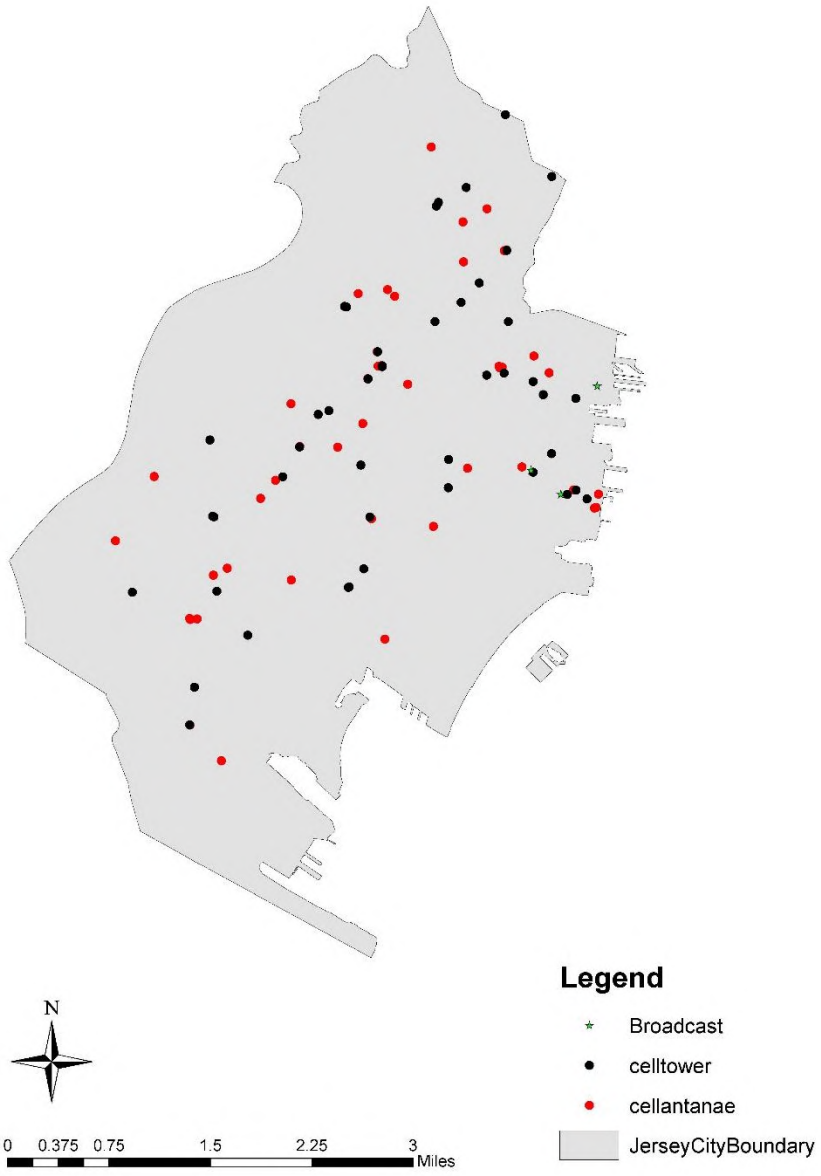
Bike Paths provided by NJDEP
Points of Interest provided by NJDEP

Jersey City Boundary provided by NJDEP
Roads provided by NJDEP
Light Rail provided by NJDEP
Light Rail Stops provided by NJDEP

1-Stanley Theatre
2-Newkirk House
3-Loews Theatre
4-Labor Bank Building
5-Apple Tree House
6-Old Bergen Church
7-Fairmount Apartments
8-Jersey City Medical Center
9- Jersey City YMCA
10-Fickens Warehouse
11- St. Patricks Church
12-Pohlmanns Hall
13-Hudson County Courthouse
14-William Dickinson HS
15-Holland Tunnel
16-PA RR Harasmis Embankment
17-Grace Van Vorst Church
18-A&P Warehouse
19-Barrow Mansion
20-City Hall
21-US Post Office
22-Little Basin
23-JC Central RR Terminal
24-Ellis Island
25-Statue of Liberty

Seungin Hong / Richard Conti / John Foss

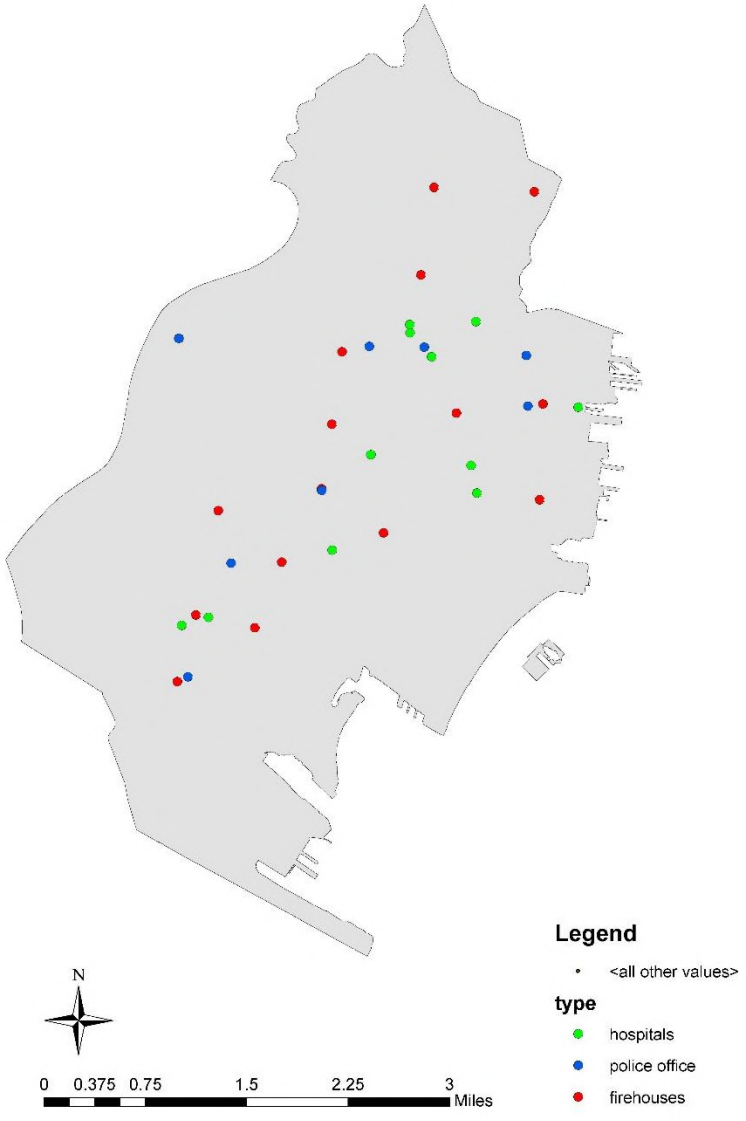
November 2014



<Braodcast, cell towers, antanae> provided by <Jersey City Planning Division>

Seungin Hong/ Rich Conti/ Jon Foss

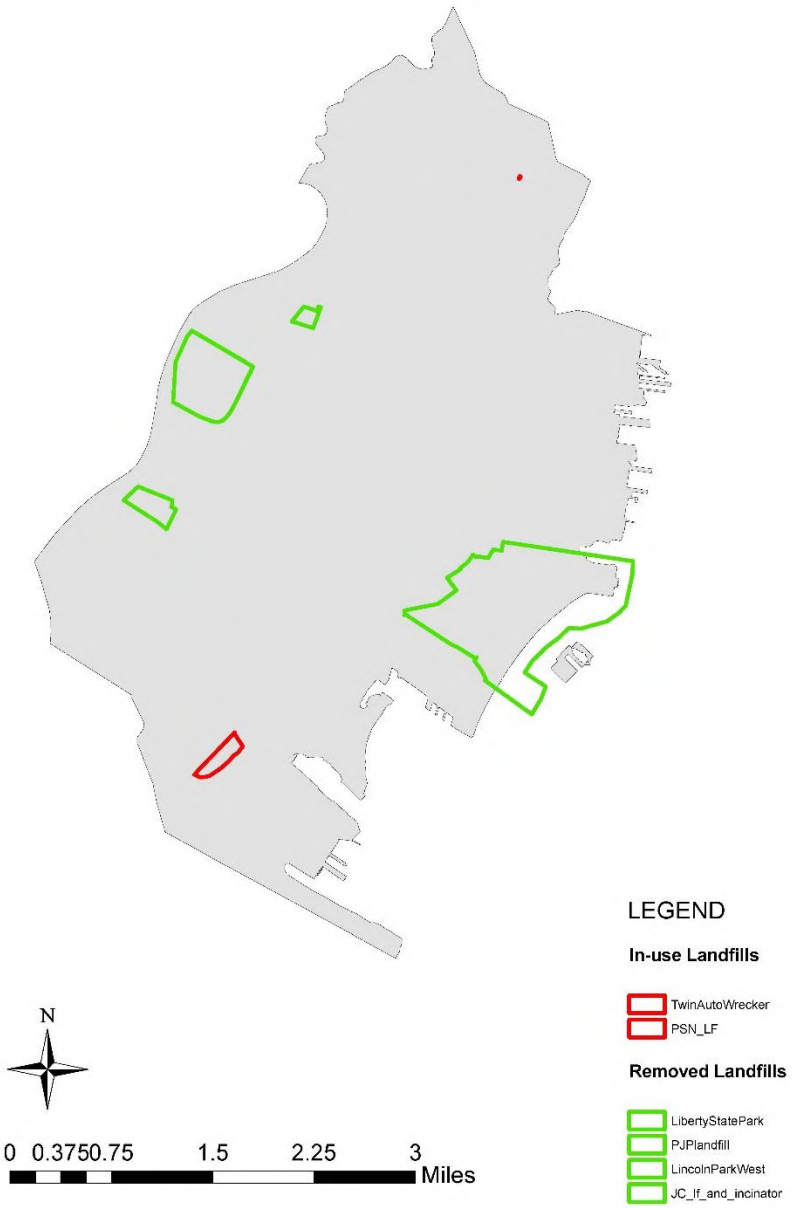
NOVEMBER 2014



<Police Officers and hospitals> provided by <Google Map>
<Firehouse> provided by <NJDOT>

Seungin Hong / Richard Conti / John Foss

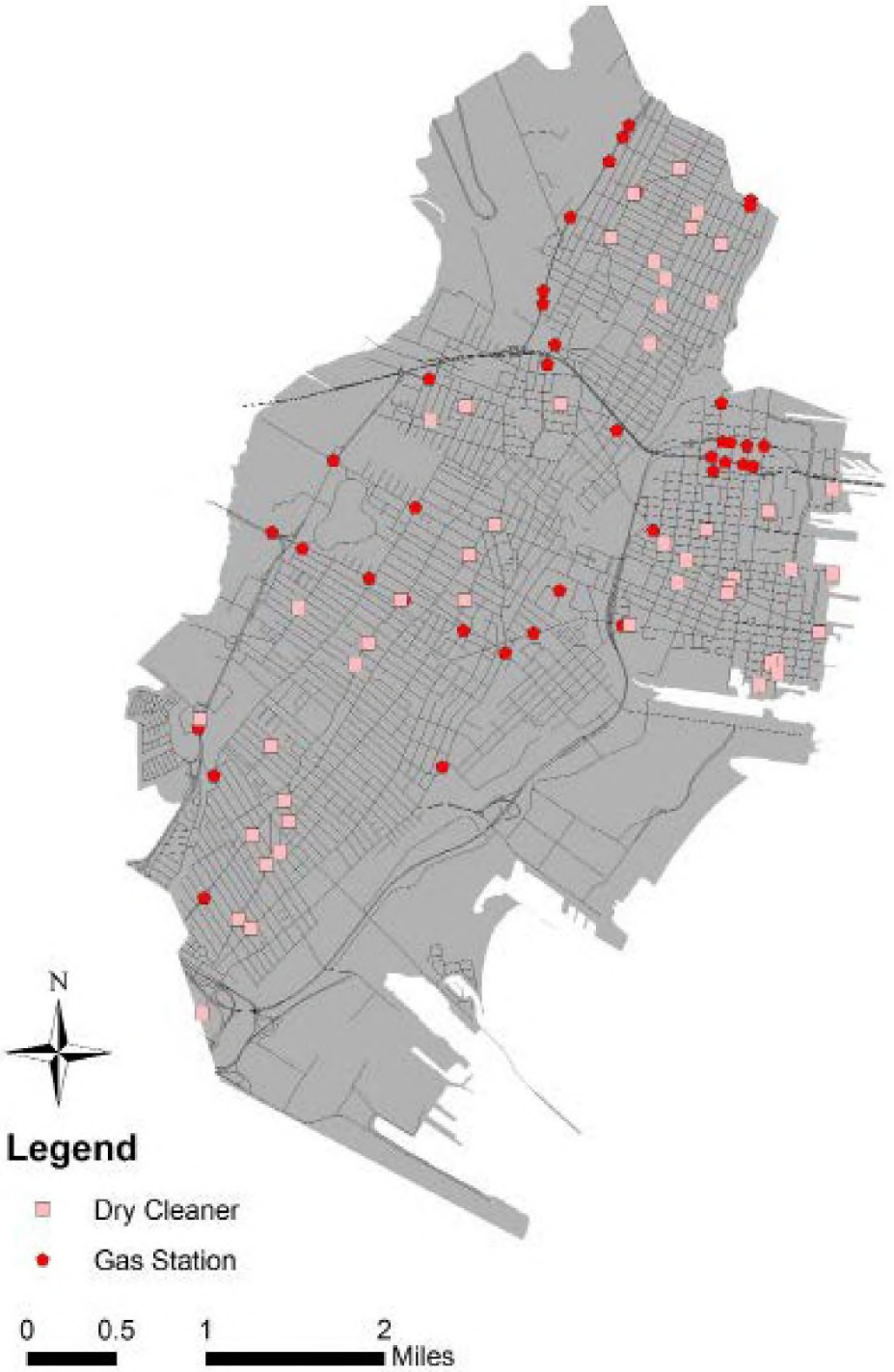
November 2014



<All landfill informations > provided by<Google Map>
<State of NJ Dept. of Env. Protection>
<State of NJ Dept. of Health>

Anthony Musso/Stacy Martinez/Shaun Thomson

October 2014



Dry Cleaner Loction provided by Google Maps
Gas Station Location provided by Google Maps
Jersey City Road Data provided by File Geodatabase Feature Class

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Center for Urban Environmental Sustainability. 2015. Jersey City Environmental Resources. 50pp.